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(54) Title: CRYSTALLINE ZAP FAMILY PROTEINS		
(57) Abstract <p>The invention relates to human ZAP-70, and in particular, to the region of ZAP-70 containing the tandem Src homology-2 ("SH2") domains, to crystalline forms thereof, liganded or unliganded, which are particularly useful for the determination of the three-dimensional structure of the protein. The three-dimensional structure of the tandem SH2 region of ZAP provides information useful for the design of pharmaceutical compositions which inhibit the biological function of ZAP and other members of the ZAP family of SH2 domain-containing proteins, particularly those biological functions mediated by molecular interactions involving one or both SH2 domains.</p> <div data-bbox="641 1249 1421 1858" style="text-align: center;"> </div>		

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Crystalline ZAP Family Proteins

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Field of the Invention

The invention relates to human ZAP-70, and in particular, to the region of ZAP-70 containing the tandem Src homology-2 ("SH2") domains, to crystalline forms thereof, liganded or unliganded, which are particularly useful for the determination of the three-dimensional structure of the protein. The three dimensional structure of the tandem SH2 region of ZAP provides information useful for the design of pharmaceutical compositions which inhibit the biological function of ZAP and other proteins of the ZAP family, particularly those biological functions mediated by molecular interactions involving one or both SH2 domains.

Background

Safe and effective immunosuppressive agents are required for the treatment of patients suffering from autoimmune disorders and for recipients of transplanted organs or tissues. For instance, in the absence of an effective immunosuppressive agent, patients often reject a transplanted organ, sometimes with fatal consequences. The immunosuppressive agent must block the immune response, but must also be sufficiently well tolerated by the body to permit chronic application. For instance, one compound with immunosuppressive activity, FK506, has been used to prevent rejection of transplanted livers. However, severe kidney toxicity has been observed in patients receiving FK506, in some cases requiring kidney transplant following the liver transplant.

Research aimed at discovering new immunosuppressive agents has been hampered by the lack of information about precise molecular mechanisms of the immune response. As a result, random screening of compounds has accounted for a substantial share of research efforts aimed at identifying new immunosuppressive drugs. More recently, "structure-based" approaches to drug design have been attempted. For example, compounds designed to bind to the protein FKBP, one of the cellular targets of FK506, were synthesized as candidate immunosuppressive agents. Those efforts were unfortunately doomed by the lack of understanding of the actual molecular

mechanism of immunosuppression mediated by FK506. It is now known that FK506 binds in a complex with two proteins, FKBP and calcineurin. FK506's immunosuppressive effects are due to the inhibition of calcineurin in T cells. However, since calcineurin is present and important in other cells, FK506 affects other cells and tissues leading to undesired effects.

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Meanwhile, independent efforts have led to the identification of a protein tyrosine kinase, ZAP-70, as a critical mediator of the immune response. Blocking the biological function of ZAP-70 will lead to immunosuppression. Unfortunately, until now, three-dimensional structural details of ZAP-70 have been completely unknown. In the absence of three-dimensional structural details for that protein, designing inhibitors based on that structure would have been impossible. We have now obtained crystals of a critical region of ZAP-70 containing its tandem SH2 domains, with and without bound ligands of various types, and have determined its three dimensional structure. With this information, it is now possible for the first time to rationally design inhibitors of ZAP-70 which can function as immunosuppressive agents, e.g. compounds which inhibit molecular interactions involving one or both of the ZAP-70 SH2 domains. Although the three-dimensional structures for several individual SH2 domains of other proteins are known, no one has heretofore reported determining the three-dimensional structure of a tandem SH2 region. And, as we discuss below, the three-dimensional coordinates of previously known SH2 domains would have been insufficient to solve the structure of the ZAP-70 tandem SH2 region.

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Summary of the Invention

This invention concerns the region of human ZAP-70 spanning its two SH2 domains. We refer to that region as the "ZAP tandem SH2 region" or simply "ZAP-NC", since the region contains both the more N-terminal SH2 domain and the more C-terminal SH2 domain of human ZAP-70 (see FIG. 4). The invention begins with obtaining crystals of human ZAP-NC, complexed or uncomplexed with various ligands, of sufficient quality to determine the three dimensional (tertiary) structure of the protein by X-ray diffraction methods.

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In considering our work, it should be appreciated that obtaining protein crystals in any case is a somewhat unpredictable art, especially in cases in which the practitioner lacks the guidance of prior successes in preparing and/or crystalizing any closely related proteins. Obtaining our first crystals of ZAP-NC was therefore itself an unexpected result. In addition, our determination of the three-dimensional structure of ZAP-NC represents the first solution of a three-dimensional structure for a tandem SH2 region from any protein and revealed an unpredicted array of surface features which contained truly surprising structural aspects. Our results are useful in a number of applications.

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For example, the knowledge obtained concerning ZAP-NC can be used to model the tertiary structure of related proteins. For instance, the structure of renin has been modeled using the tertiary structure of endothiapepsin as a starting point for the derivation. Model building of cercarial elastase and tophozoite cysteine protease were each built from known serine and cysteine proteases that have less than 35% sequence identity. The resultant models were used to design inhibitors in the low micromolar range. (*Proc. Natl. Acad. Sci.* 1993, 90, 3583). Furthermore, alternative methods of tertiary structure determination that do not rely on X-ray diffraction techniques and thus do not require crystallization of the protein, such as NMR techniques, are simplified if a model of the structure is available for refinement using the additional data gathered by the alternative technique. Thus, knowledge of the tertiary structure of the ZAP tandem SH2 region provides a significant window to the structure of the other ZAP family members, including for example SYK.

Knowledge of the three-dimensional structure of a tandem SH2 region such as ZAP-NC provides a means for investigating the mechanism of action of the protein and tools for identifying inhibitors of its function. For example, SH2 domains are known to be involved in intramolecular and intermolecular interactions, usually protein-protein interactions, which are critical for biological activity of the SH2-bearing protein. Knowledge of the three-dimensional structure of the tandem SH2 region allows one to design molecules capable of binding thereto, including molecules which are thereby capable of inhibiting the interaction of the tandem SH2 region with its natural ligand(s).

Accordingly, one object of this invention is to provide a composition comprising a protein in crystalline form having a peptide sequence derived or selected from that of a protein of the ZAP family. The protein will comprise at least one, and preferably two SH2 domains, e.g., a protein containing the tandem SH2 region of ZAP-70, SYK or other related tandem SH2 containing protein. In the case of ZAP-70, the protein may comprise a peptide sequence spanning at least amino acid residues 3-279. Such a crystalline composition may contain one or more heavy atoms, e.g., one or more lead, mercury, gold and/or selenium atoms, for instance. Such a heavy atom derivative may be obtained, for example, by expressing a gene encoding the protein under conditions permitting the incorporation of one or more heavy atom labels (e.g. as in the incorporation of selenomethionine), reacting the protein with a reagent capable of linking a heavy atom to the protein (e.g. trimethyl lead acetate) or soaking a substance containing a heavy atom into the crystals.

The protein may be in the form of a complex with one or more ligand molecules, "ligand" being used in the broadest sense, referring to any substance capable of observable binding to the protein. The peptide sequence of naturally occurring ligands ("ITAMs", see below) for a number of SH2 domains is known and consensus sequence information on peptide ligands for SH2

domains has been discussed in the scientific literature. In the case of ZAP-70, peptide ligands of 15-19 residues derived in sequence from naturally occurring ligands for ZAP-70 or other SH2 domains may be used. Those ligands typically contain one or two phosphorylated tyrosine residues. Alternatively, one or both of such phosphorylated tyrosine moieties may be replaced
5 by phosphotyrosine mimetic reagents, numerous examples of which are known in the art.

Illustrative crystalline compositions of this invention having various physicochemical characteristics are disclosed *infra*. Preferred crystalline compositions of this invention are capable of diffracting x-rays to a resolution of better than about 3.5 Å, and more preferably to
10 a resolution of 2.6 Å or better, and even more preferably to a resolution of 2.2 Å or better, and are useful for determining the three-dimensional structure of the material. (The smaller the number of angstroms, the better the resolution.)

Crystalline compositions of this invention specifically include those in which the crystals
15 comprise ZAP-family proteins characterized by the structural coordinates set forth in any of the accompanying Appendices or characterized by coordinates having a root mean square deviation therefrom, with respect to backbone atoms of amino acids listed in the Appendices, of 1.5 Å or less.

20 Structural coordinates of a crystalline composition of this invention may be stored in a machine-readable form on a machine-readable storage medium, e.g. a computer hard drive, diskette, DAT tape, etc., for display as a three-dimensional shape or for other uses involving computer-assisted manipulation of, or computation based on, the structural coordinates or the three-dimensional structures they define. For example, data defining the three dimensional
25 structure of a protein of the ZAP family, or portions or structurally similar homologues of such proteins, may be stored in a machine-readable storage medium, and may be displayed as a graphical three-dimensional representation of the protein structure, typically using a computer capable of reading the data from said storage medium and programmed with instructions for creating the representation from such data. This invention thus encompasses a
30 machine, such as a computer, having a memory which contains data representing the structural coordinates of a crystalline composition of this invention, e.g. the coordinates set forth in our Appendices, together with additional optional data and instructions for manipulating such data. Such data may be used for a variety of purposes, such as the elucidation of other related structures and drug discovery.

35 For example, a first set of such machine readable data may be combined with a second set of machine-readable data using a machine programmed with instructions for using the first data set and the second data set to determine at least a portion of the coordinates corresponding to the second set of machine-readable data. For instance, the first set of data may comprise a Fourier

transform of at least a portion of the coordinates for ZAP or SYK proteins set forth in the Appendices hereto, while the second data set may comprise X-ray diffraction data of a molecule or molecular complex.

5 More specifically, one of the objects of this invention is to provide three-dimensional structural information on new complexes of ZAP family members with various ligands, as well as structural information on other tandem SH2 regions, previously unsolved individual SH2 domains, new ZAP family members and muteins or other variants of any of the foregoing. To that end, we provide for the use of the structural coordinates of a crystalline composition of this
10 invention, or portions thereof, to solve, e.g. by molecular replacement, the three dimensional structure of a crystalline form of such a protein or protein:ligand complex, typically involving a protein containing at least one SH2 domain. Doing so involves obtaining x-ray diffraction data for crystals of the protein or protein:ligand co-complex for which one wishes to determine the three dimensional structure. Then, one determines the three-dimensional structure of that
15 protein or complex by analyzing the x-ray diffraction data using molecular replacement techniques with reference to the previous structural coordinates. As described in US Patent No. 5,353,236, for instance, molecular replacement uses a molecule having a known structure as a starting point to model the structure of an unknown crystalline sample. This technique is based on the principle that two molecules which have similar structures, orientations and positions
20 in the unit cell diffract similarly. Molecular replacement involves positioning the known structure in the unit cell in the same location and orientation as the unknown structure. Once positioned, the atoms of the known structure in the unit cell are used to calculate the structure factors that would result from a hypothetical diffraction experiment. This involves rotating the known structure in the six dimensions (three angular and three spatial dimensions) until
25 alignment of the known structure with the experimental data is achieved. This approximate structure can be fine-tuned to yield a more accurate and often higher resolution structure using various refinement techniques. For instance, the resultant model for the structure defined by the experimental data may be subjected to rigid body refinement in which the model is subjected to limited additional rotation in the six dimensions yielding positioning shifts of under about
30 5%. The refined model may then be further refined using other known refinement methods.

For example, one may use molecular replacement to exploit a set of coordinates such as set forth in Appendix I, Appendix II or Appendix III to determine the structure of a crystalline co-complex of ZAP-NC, or a portion thereof, with a ligand other than the ζ 1 peptide. Likewise one
35 may use that same approach to determine the three dimensional structure of a co-complex of SYK-NC, or a portion thereof, with a ligand therefor.

Another object of the invention is to provide a method for determining the three-dimensional structure of a protein containing at least one SH2 domain, or a co-complex of the protein with a

ligand therefor, using homology modeling techniques and structural coordinates for a composition of this invention. Homology modeling involves constructing a model of an unknown structure using structural coordinates of one or more related proteins, protein domains and/or subdomains. Homology modeling may be conducted by fitting common or homologous portions of the protein or peptide whose three dimensional structure is to be solved to the three dimensional structure of homologous structural elements. Homology modeling can include rebuilding part or all of a three dimensional structure with replacement of amino acids (or other components) by those of the related structure to be solved. For example, using the structural coordinates of ZAP-NC complexed with the ζ 1 peptide, one may determine the three dimensional structure of SYK-NC or a portion thereof, using homology modeling. A set of coordinates defining the three dimensional structure of SYK-C complexed with the peptide Thr-pTyr-Glu-Thr-Leu which were obtained from evaluation of NMR data are set forth in Appendix IV. Those coordinates may be stored, displayed, manipulated and otherwise used in like fashion as the ZAP-NC coordinates of Appendices I - III.

Thus, crystalline compositions of this invention provide a starting material for use in solving the three-dimensional structure of other members of the ZAP-70 family of proteins, notably SYK, as well as newly discovered proteins containing at least one SH2 domain and linking polypeptide (i.e., non-SH2 polypeptide) where the linking polypeptide has at least about 25% peptide sequence similarity, or preferably identity, to a portion (preferably at least six amino acids) of the ZAP-NC or SYK-NC inter-SH2 linking domain. Sequence similarity may be determined using any conventional similarity matrix. See e.g. Dayhoff, M.O.; Schwartz, R.M.; Orcutt, B.C., *Atlas of Protein Sequence and Structure* 1979, 5, Suppl. 3,345; Greer, J., *J. Mol. Biol.* 1981, 153, 1027; and Gonnet, G.H., Cohen, M.A., Benner, S.A. *Science* 1992, 256, 1443. Proteins containing at least one SH2 domain together with non-SH2 domain peptide sequence homologous to the interdomain linker of ZAP or SYK, i.e. containing at least 25% peptide sequence identity or similarity as described above, are considered ZAP family members for the purpose of this disclosure.

By way of further example, the structure defined by the machine readable data may be computationally evaluated for its ability to associate with various chemical entities. The term "chemical entity", as used herein, refers to chemical compounds, complexes of at least two chemical compounds, and fragments of such compounds or complexes.

For instance, a first set of machine-readable data defining the 3-D structure of a ZAP-family protein, or a portion or co-complex thereof, is combined with a second set of machine-readable data defining the structure of a chemical entity or moiety of interest using a machine programmed with instructions for evaluating the ability of the chemical entity or moiety to associate with the ZAP-family protein or portion or complex thereof and/or the location and/or

orientation of such association. Such methods provide insight into the location, orientation and energetics of association of the ZAP family protein with such chemical entities.

- Chemical entities that are capable of associating with the ZAP family member may inhibit its interaction with naturally occurring ligands for the protein and may inhibit biological functions mediated by such interaction. In the case of ZAP-70, such biological functions include activation of T cells during an immune response. Such chemical entities are potential drug candidates.
- The protein structure encoded by the data may be displayed in a graphical format permitting visual inspection of the structure, as well as visual inspection of the structure's association with chemical entities. Alternatively, more quantitative or computational methods may be used. For example, one method of this invention for evaluating the ability of a chemical entity to associate with any of the molecules or molecular complexes set forth herein comprises the steps of: a) employing computational means to perform a fitting operation between the chemical entity and a binding pocket or other surface feature of the molecule or molecular complex; and b) analyzing the results of said fitting operation to quantify the association between the chemical entity and the binding pocket.
- This invention further provides for the use of the structural coordinates of a crystalline composition of this invention, or portions thereof, to identify reactive amino acids, such as cysteine residues, within the three-dimensional structure, preferably within or adjacent to a ligand binding site; to generate and visualize a molecular surface, such as a water-accessible surface or a surface comprising the space-filling van der Waals surface of all atoms; to calculate and visualize the size and shape of surface features of the protein or complex, e.g., ligand binding pockets; to locate potential H-bond donors and acceptors within the three-dimensional structure, preferably within or adjacent to a ligand binding site; to calculate regions of hydrophobicity and hydrophilicity within the three-dimensional structure, preferably within or adjacent to a ligand binding site; and to calculate and visualize regions on or adjacent to the protein surface of favorable interaction energies with respect to selected functional groups of interest (e.g. amino, hydroxyl, carboxyl, methylene, alkyl, alkenyl, aromatic carbon, aromatic rings, heteroaromatic rings, substituted and unsubstituted phosphates, substituted and unsubstituted phosphonates, substituted and unsubstituted fluoro and difluorophosphonates; etc.). One may use the foregoing approaches for characterizing the protein and its interactions with moieties of potential ligands to design or select compounds capable of specific covalent attachment to reactive amino acids (e.g., cysteine) and to design or select compounds of complementary characteristics (e.g., size, shape, charge, hydrophobicity/hydrophilicity, ability to participate in hydrogen bonding, etc.) to surface features of the protein, a set of which may be preselected. Using the structural coordinates, one

may also predict or calculate the orientation, binding constant or relative affinity of a given ligand to the protein in the complexed state, and use that information to design or select compounds of improved affinity.

5 In such cases, the structural coordinates of the ZAP family protein, or portion or complex thereof, are entered in machine readable form into a machine programmed with instructions for carrying out the desired operation and containing any necessary additional data, e.g. data defining structural and/or functional characteristics of a potential ligand or moiety thereof, defining molecular characteristics of the various amino acids, etc.

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One method of this invention provides for selecting from a database of chemical structures a compound capable of binding to a ZAP family protein. The method starts with structural coordinates of a crystalline composition of the invention, e.g., coordinates defining the three dimensional structure of a ZAP family protein or a portion thereof. Points associated with that
15 three dimensional structure are characterized with respect to the favorability of interactions with one or more functional groups. A database of chemical structures is then searched for candidate compounds containing one or more functional groups disposed for favorable interaction with the protein based on the prior characterization. Compounds having structures which best fit the points of favorable interaction with the three dimensional structure are thus
20 identified.

It is often preferred, although not required, that such searching be conducted with the aid of a computer. In that case a first set of machine-readable data defining the 3D structure of a ZAP-family protein, or a portion or protein-ligand complex thereof, is combined with a second set of
25 machine readable data defining one or more moieties or functional groups of interest, using a machine programmed with instructions for identifying preferred locations for favorable interaction between the functional group(s) and atoms of the protein. A third set of data, i.e. data defining the location(s) of favorable interaction between protein and functional group(s) is so generated. That third set of data is then combined with a fourth set of data defining the 3D
30 structures of one or more chemical entities using a machine programmed with instructions for identifying chemical entities containing functional groups so disposed as to best fit the locations of their respective favorable interaction with the protein.

Compounds of the structures selected or designed by any of the foregoing means may be tested
35 for their ability to bind to a ZAP family protein, inhibit the binding of a ZAP family protein to a natural or non-natural ligand therefor, and/or inhibit a biological function mediated by a ZAP family member.

This invention also provides peptidomimetic methods for designing a compound capable of binding to a ZAP family protein. One such method involves graphically displaying a three-dimensional representation based on coordinates defining the three-dimensional structure of a ZAP family protein or a portion thereof complexed with a ligand. Interactions between portions of a ligand and the protein are characterized in order to identify candidate moieties for replacement. One or more portions of the ligand which interact with the protein may be replaced with substitute moieties selected from a knowledge base of one or more candidate substitute moieties, and/or moieties may be added to the ligand to permit additional interactions with the protein.

The computational approaches and structural insights disclosed herein also permit the design or identification of molecules with *reduced* capability, or substantial *inability*, to bind to a ZAP family protein. To such end, one may apply the same modeling and computational methods to the data described herein, but with the opposite goal, i.e., to design or identify compounds which *lack* substantial binding affinity to one or more ZAP family members. That can be useful in research efforts aimed at discovery of inhibitors of SH2-mediated interactions other than those mediated by a ZAP family member. The goal of such efforts are inhibitors of those other SH2-mediated interactions which lack ZAP-family mediated activities, such as immunosuppression, which in that context, would be undesired side effects.

Compounds first identified by any of the methods described herein are also encompassed by this invention.

Brief Description of the Drawings

FIG. 1A Backbone ribbon representation of the overall fold of the complex of ZAP-NC and the ζ_1 peptide oriented such that the N-terminal SH2 domain is on the left-hand side of the figure, the C-terminal SH2 domain is on the right-hand side of the figure and the inter-SH2 domain region is in the middle, dropping toward the bottom of the figure. Secondary structural elements are labeled according to the convention for SH2 domains.²⁰ An α -carbon trace of the peptide is included. All elements are labeled in ZAP-N; in ZAP-C, only the central sheet and helices are labeled. Termini of the protein and peptide are denoted by N and C. Loop regions are named for the secondary elements which they connect, i.e., the BC loop connects strands B and C. The N terminus of the peptide is at the right-hand side of the figure. The peptide consists of 19 residues, starting at residue 48 of the mature ζ subunit of the T cell receptor (TCR). Phosphotyrosines are at relative positions 4 and 15. Definition of least squares planes fitted to the main chain atoms of each pYXXL motif generates a pair of planes at an angle of 120°. Due to the staggered orientation of the SH2 domains, the pYXXL motifs are separated by an "S"-shaped segment of peptide. This sequence contains nearly one full turn of an α -helix between residues ζ

Asn 8 and ζ Arg 12. Pockets for each pY and pY+3 residue are visible. It is notable that the N-terminal ζ_1 residues contribute to the enclosure of ζ pTyr 4. The figure was generated with Sybyl (Tripos). An electron density map of the region near the interface between the two SH2 domains may be calculated with $2|F_O| - |F_C|$ coefficients for data between 15.0 and 1.9 Å,

5 contoured at 1.0 σ .

FIG. 1B The BC loop, from β B5 to β C3, of ZAP-N may be superimposed with the corresponding residues of the Lck SH2:middle T complex²⁰ and the relative position of the BC loops examined when the structures are fitted according to secondary structural elements. Superimposition of the backbone atoms of the loops results in an r.m.s. deviation of 0.65 Å. Similar results are observed with the BC loop of ZAP-C. In complexes of phosphopeptides with isolated SH2 domains, the BC loop contributes nearly half of the direct hydrogen bonds to the phosphate group. For both SH2 domains of ZAP-NC, the BC loop is extended such that several waters are mediating contact between the loop and the phosphate group. An extended conformation is also observed for uncomplexed SH2 domains, and has been reported in complexes with peptides in which the phosphate group is replaced by a phosphonate.¹⁴ The loop is repositioned via a hinged motion about the residues at β B5 and β C3. The BC loop of ZAP-C is more extended; ZAP-N experiences hindered motion about BC due to its interactions with ZAP-C.

20 FIG. 2 Sequence alignments [SEQ ID NOS 21 - 25] for selected SH2 domains.³³ Boxed areas indicate segments used for measuring "full" backbone r.m.s. deviation; unboxed areas are excluded from the calculation due to the presence of gaps for one or more of the sequences. Notation below the alignments indicate structurally conserved regions, and use the previously reported nomenclature;²⁰ these regions were used for the "core" r.m.s. deviation calculation.

25 Thin-lined boxed areas within ZAP-N and ZAP-C indicate the secondary structural elements in ZAP-NC. Src = avian Src; Lck = human p56-Lck; Syp-N = N-terminal SH2 of murine Syp phosphatase (PTP1D); ZAP-N(C) = N- or C- terminal SH2 of human ZAP-70.

FIG. 3 Phosphotyrosine binding sites. The phosphotyrosine residues are oriented in a similar fashion in each figure to facilitate direct comparison. a, Selected residues for the ζ pTyr 4 association with ZAP-C. Direct hydrogen bonds to the phosphate group of ζ pTyr 4 are indicated by dashed lines. Crystallographic waters are indicated as spheres; waters labeled 551, 555, and 556 make bridging contacts between the phosphate and the SH2 domain, water 622 forms a bridge to ζ_1 . b, Selected residues in close association with ζ pTyr 15. As in a, dashed lines indicate direct hydrogen bonds to the phosphate group. Tyr 238 and Lys 242 from ZAP-C complete the hydrogen-bonding network of the phosphate. Waters are represented as spheres; all of them are involved in salt-bridging the phosphotyrosine to the SH2 domains. Several residues that form the pocket have been omitted for clarity. c. The interface between the SH2 domains involves an extensive network of hydrogen bonds. Interactions involving ζ pTyr 15

have been described elsewhere herein. Several hydrophobic contacts also exist, the most provocative of these is the protrusion of Arg 41 (ZAP-N BC loop) into a small hydrophobic depression formed by Phe 229 (ZAP-C β F), Tyr 238 (ZAP-C α B), and the side chain of Thr 227 (ZAP-C EF loop). Arg 41 also has three hydrogen-bonding contacts to ZAP-C. This is the first of three residues in the BC loop of ZAP-N that form an artificial parallel sheet with strand F in ZAP-C. Only one of the three hydrogen-bonding contacts involves main chain atoms exclusively.

FIG. 4 Schematic view of ZAP-70 bound to the ζ_1 subunit of the activated T cell receptor. Left: Activation of T cells is initiated by association of the T cell receptor (TCR) with a peptide antigen bound to the major histocompatibility complex (MHC) on an antigen-presenting cell. TCR-MHC association stimulates phosphorylation of T cell receptor subunits on tyrosines within the ITAMs (most likely by the Src family PTKs, Lck or Fyn). ZAP-70 binds to the phosphorylated ITAM via its tandem SH2 domains (amino acids 1-259) in an orientation such that the N-SH2 domain binds to the C-proximal pYXXL motif and the C-SH2 domain binds the N-proximal pYXXL motif. Proposed positions of the other domains of ZAP-70, referred to as interdomain B (amino acids 260-310) and catalytic domain (amino acids 311-620) are illustrated. Two ZAP-70 molecules could bind to the activated TCR complex since the ζ subunit is present as a disulfide-linked dimer. Right: Schematic representation of the complex between the SH2 domains of ZAP-70 in complex with the doubly-phosphorylated ζ_1 ITAM. The SH2 domains of ZAP-70 make extensive contacts with the ζ_1 peptide. The primary determinants of binding are the phosphotyrosine and leucine residues of two pYXXL sequences within an ITAM. The structure reveals a unique binding pocket for the pY of the C-proximal pYXXL motif in the interface between the two SH2 domains. In addition, the crystal structure reveals that interdomain A forms a coiled-coil helical structure. This domain may participate in positioning the two SH2 domains for association with ITAMs, and in communicating structural changes to interdomain B and/or the kinase domain upon receptor engagement.

FIG. 5 depicts a binding curve of a doubly-phosphorylated ζ_1 :ZAP-NC complex, with associated Scatchard plot of the data, as determined by fluorescence polarization.

FIG. 6 depicts the ZAP-NC: ζ_1 complex encased in a gridded box for receptor site mapping. Only the backbone of ZAP-NM and the peptide are illustrated. Colors may be indicated as follows: red and blue for oxygen and nitrogen atoms, respectively; yellow for carbon atoms of the peptide; cyan, orange and green for N-terminal SH2 domain, the inter-SH2 spacer and the C-proximal SH2 domain carbon atoms, respectively. Note that the box encompasses space that is occupied by the peptide, as well as several interfacial regions of the SH2 domains.

FIG. 7 depicts a representative site contour map of ZAP-NC. FIG. 7A A selected region of the receptor map for ZAP-NC plus an amino cation probe contoured at -10 kcal/mol. A pocket on the protein surface is indicated by a solvent-accessible surface. FIG. 7B The individual amino acids that are in close proximity to the contour map are shown explicitly. The position of the contour indicates that strong interactions will be achieved between a hydrogen-bond donating moiety and the main chain carbonyl oxygens of Arg 192, Glu 194, and Thr 197, as well as the side chains of Gln 195 and Tyr 198.

FIG. 8 depicts a computer system.

FIG. 9 depicts storage media of this invention.

Detailed Description of the Invention

A. Introduction: The immune response is mediated by signalling through the T cell receptor complex with which ZAP-70 is associated

T cell recognition of antigen-presenting cells initiates a cascade of intracellular processes that ultimately result in changes in gene expression, the production of secreted mediators, and cellular proliferation. ^{1, 2} This recognition is mediated by the T cell receptor (TCR), which consists of the antigen binding subunits α and β , the CD3 complex of δ - ϵ and γ - ϵ heterodimers, and the ζ homodimer. With the exception of α and β , the intracellular portion of each subunit includes one to three peptide sequences that contain the motif YXX(L/I)X(7-8)YXX(L/I), where X is variable. ³ Following receptor stimulation, these immunoreceptor tyrosine activation motifs, or ITAMs, become phosphorylated on tyrosine residues and in this modified form, provide binding sites for downstream signaling proteins.

The TCR has no intrinsic protein tyrosine kinase (PTK) activity, however members of both the Src family and the SYK/ZAP-70 family of PTKs are implicated in the functioning of antigen receptors. ⁴ Current evidence indicates that Src family kinases phosphorylate the ITAMs of the TCR. ⁴ ZAP-70 then associates with the doubly-phosphorylated ITAMs of the ζ and CD3 ϵ chains through its SH2 domains ⁵ and is itself phosphorylated during early T cell activation. ⁶ ZAP-70 (ζ associated protein) is a 70 KDa protein tyrosine kinase that is expressed exclusively in T cells and NK cells. ⁷ ZAP-70 is known to play a critical role in T cell activation. Genetic alterations in the ZAP-70 gene that cause loss of expression of ZAP-70 in humans prevent antigen activation of CD4⁺ T cells, inhibit maturation of CD8⁺ T cells, and lead to severe combined immunodeficiencies. ^{8, 9} ZAP-70 binding to the TCR is believed to be essential for signal transduction since peptides that block the association of ZAP-70 with the ζ chain also

inhibit T cell signaling events.¹⁰ For these reasons, ZAP-70 is an ideal target for the development of novel immunosuppressive therapies.

The first 259 residues of ZAP-70 consist of two SH2 domains that are connected by a 65
5 residue segment and are followed by a second connecting region and a catalytic domain.⁷ SH2
domains consist of approximately 100 amino acids. Their role in the specific recognition of
tyrosine-phosphorylated proteins is integral to a variety of intracellular signaling events
(recently reviewed in ^{11, 12}). Several SH2 domains have been demonstrated to retain the
ability to bind with high affinity to short peptides that contain phosphotyrosine (pY) when
10 expressed as isolated proteins. Selectivity for isolated SH2 domains is dependent upon
recognition of residues immediately C-terminal to the phosphorylated tyrosine (pY+n). The
three-dimensional structures of several isolated SH2 domains (both liganded and
unliganded),^{13, 14} as well as one SH3-SH2 complex¹⁵ and one SH3-SH2-SH3 protein,¹⁶
have been determined by X-ray crystallography or NMR. In order to bind to the TCR, ZAP
15 requires that both of its SH2 domains are present and functional and that both tyrosines within
the ITAM are phosphorylated.^{17 - 19}

B. Structure Determination

20 Despite the pivotal role of ZAP-70 in the immune response, nothing was known of the three-
dimensional architecture by which the tandem SH2 region of ZAP-70 engages the ITAMs in the
interactions required for its biological activity. X-ray crystallographic techniques could in
principle address such issues. However, notwithstanding the key biological functions mediated
by ZAP-70 and other ZAP family members such as SYK, there have been no reports disclosing
25 that suitable crystals had been or could be obtained, let alone reports disclosing any x-ray
crystallographic data or other information concerning the three-dimensional structure of any
tandem SH2 domain. Even in the event that crystals had been obtained, then-available three-
dimensional structural data relating to individual SH2 domains would not have been useful in
solving the tandem structure, at least in part, because it wouldn't have permitted least squares
30 minimization techniques necessary for structure refinement.

Nonetheless, we have succeeded in producing a protein containing the peptide sequence of the
region of human ZAP-70 spanning both the more N-terminal SH2 domain, the more C-terminal
SH2 domain and the linking region ("ZAP-NC"), and have obtained crystals of that protein,
35 crystallized in unliganded form and in complexes with various ligands. Using such materials, we
have solved the three-dimensional structure of ZAP-NC using x-ray diffraction techniques. In
view of our successes as disclosed herein, it can now be said that proteins comprising tandem
SH2 domains, especially those of ZAP family members such as ZAP and SYK, can be produced in
stable form, purified, and crystallized whether in complexes with a ligand or not, and that their

three-dimensional structures can be determined, all using materials and methods such as disclosed herein.

Materials

5 As mentioned elsewhere, ZAP-NC is one of a number of proteins that contain two src-homology 2 (SH2) domains. The presence and boundaries of an SH2 domain in a protein sequence can be identified by using a computer alignment program that identifies amino acid sequence homology to a known SH2 domain. Generally, the SH2 domain (amino acids between 140-255) of Src are used for such analyses, but SH2 domains from other proteins can be used as well. The alignment
10 method typically used by such programs is the Needleman-Wunch alignment. See e.g., "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins." Needleman, S.B.; Wunch, C.D. *J. Mol. Biol.* 1970, 48, 443-453. SH2 domains have been identified in a large and growing number of proteins, some of which contain multiple SH2 domains. For example, tandem SH2 regions are present in human ZAP-70 (spanning amino
15 acids 1-259), human SYK (spanning amino acids q - z), PLC γ , PI3K, rasGAP, SH-PTP1, and SH-PTP2.

We expressed ZAP-NC as a glutathione-S-transferase (GST) fusion protein. The cDNA encoding residues 1-259 from human ZAP-70¹⁰ was cloned into the pGEX2T expression vector⁴¹ and
20 transformed into *E. coli* BL21 or *E. coli* B834. The resulting construct produced a fusion protein of GST-ZAP-NC linked by a polypeptide segment containing the sequence -LVPRGS- which comprises a thrombin cleavage site. The selenomethionyl (SeMet) ZAP-NC was produced using the auxotrophic strain of *E. coli* 834⁴² with the selenomethionine replacing methionine in a defined media. The GST-ZAP-NC fusion protein was isolated using glutathione agarose and
25 then cleaved with thrombin. Cleavage yields two polypeptides, the GST and ZAP-NC. The ZAP-NC polypeptide contains two extra amino acids (Gly-Ser) at the amino terminus from the linker segment of the pGEX2T expression vector. These two extra amino acids were shown to have no functional effect on ZAP-NC binding to peptide ligands. ZAP-NC was separated from GST by binding ZAP-NC to a phosphotyrosine agarose column and eluting with a salt gradient.

30 Subsequently, ZAP-NC was further purified on a phenyl sepharose column. ZAP-NC:peptide ligand complexes were formed by mixing two-fold excess of peptide and purified ZAP-NC, then subjecting the mixture to chromatography using a superdex 75 gel filtration column. Fractions containing the purified ZAP-NC:peptide complex were combined and used for subsequent crystallization experiments.

35

Other ZAP-NC proteins may also be used, including ZAP-NC proteins truncated at the N-terminus and/or C-terminus to contain just the SH2 homology boundaries. Likewise, the protein may be extended at the C-terminus to include additional amino acids extending to include additional domains (spacer B) up to the entire ZAP-70 protein (amino acids 1-620).

Additionally, other tandem SH2 regions, especially from human and non-human ZAP family members, including proteins such as human SYK, may be prepared and used in analogous fashion to that described herein. It should further be appreciated that other expression systems may be readily employed. For instance, the tandem SH2 protein may be produced in *E. coli* using T7, maltose-binding protein fusion (MBP), with epitope tags (His6, HA, myc, Flag) included or cleaved off. Baculoviral expression may be used, e.g. using pVL1393 or derivatives, for tandem SH2 protein, fused (or not) to epitope tag or fusion partner such as GST. Conventional materials and methods for expression in mammalian, yeast or other cells may also be used.

- Peptide ligands for co-crystallization with ZAP-NC or other tandem SH2 proteins may be prepared using conventional methods, containing peptide sequences based on naturally occurring ITAM sequences such as ITAM sequences derived from the T cell receptor ζ 1, ζ 2, ζ 3, ϵ , γ or δ subunits or from the β or γ subunits of the IgE receptor, for example. In most cases such ligands will contain the 15 amino acid minimal ITAM sequence YXXLXXXXXXXXYXXL [SEQ ID NO 1] and may contain additional amino acids at either or both the N- and C-termini. The N-terminus may comprise a free amino group or may be modified, e.g. amidated. Likewise, the C-terminus may be a free carboxylate or may be amidated or otherwise modified. Tyrosines may (each) be phosphorylated (pTyr). Alternatively, difluorophosphonoTyr, phosphonomethyl phenylalanine, hemi-phosphorylated Tyr, or other pTyr mimetics may be used in place of pTyr. The ligand may contain amino acid replacements, insertions or deletions with respect to a naturally occurring ITAM sequence. Furthermore, hybrid peptide-nonpeptide ligands and non-peptide ligands may also be used. Examples of such ligands are depicted in Table 1.

Crystallization

- Crystallization experiments were conducted using a sparse matrix screening approach, in the case of ZAP-NC crystals, beginning with a Crystal Screen 1 kit (Hampton Research, Riverside, CA). Crystals containing SYK-NC were obtained as described below. In the case of ZAP-NC, best results were obtained using protein stabilized in 0.5 M NaCl, followed by removal of salt by dialysis prior to the crystallization experiments. Special handling of that sort was not necessary for SYK-NC, but may be useful for other tandem SH2 containing proteins.

- For example, crystals of ZAP-NC complexed with the doubly-phosphorylated 19meric ζ_1 ITAM peptide (Ligand 5, Table 1) were grown from polyethylene glycol (PEG) 4000. The structure was elucidated by multiple isomorphous replacement at 1.9 Å resolution. It was not possible to solve the structure by molecular replacement alone using coordinates for previously determined SH2 domains. This was due to the low sequence identity with other SH2 domains and between the two ZAP domains, as well as to the presence of the 65 residue interdomain region. The details of crystallization, data collection, multiple isomorphous replacement (MIR), and refinement are described below.

- Specifically, ZAP-NC complexed with doubly-phosphorylated ζ_1 peptide was concentrated to 30 mg/ml in 20mM Tris, pH 8.5, 200mM sodium chloride and 20mM dithiothreitol. The complex was treated with 4mM trimethyllead acetate (TML). Crystals were obtained by vapor diffusion in hanging drops containing 13.5 mg/ml complex and 10% PEG 4000, 50mM sodium citrate, 100mM ammonium acetate, 0.005% sodium azide and 20mM dithiothreitol, pH 6.2, over reservoirs of 20% PEG 4000 and 20mM dithiothreitol. The crystals are monoclinic ($P2_1$, $a=50.11$, $b=63.37$, $c=54.00$ Å, $\beta=114.44^\circ$) with one molecule per asymmetric unit.
- 10 In other experiments, using similar conditions, we were also able to obtain crystals of ZAP-NC complexed with doubly-phosphorylated ζ_1 peptide which were found to contain two molecules per asymmetric unit. Those crystals are also monoclinic ($P2_1$, $a=65.17$, $b=62.00$, $c=78.67$ Å, $\beta=111.32^\circ$).
- 15 As described in detail in Experimental Example III (A) and (B), crystals were also obtained under similar conditions of liganded and unliganded ZAP-NC and SYK-NC proteins.

TABLE 1: Various Tandem SH2 Ligands

(1) IgE γ TAM 19mer [SEQ ID NO 2] Ac.Asp.Gly.Val.pTyr.Thr.Gly.Leu.Ser.Thr.Arg.Asn.Gln.- Glu.Thr.pTyr.Glu.Thr.Leu.Lys.NH₂
(2) IgE γ TAM 15mer [SEQ ID NO 3] Ac.pTyr.Thr.Gly.Leu.Ser.Thr.Arg.Asn.Gln.Glu.Thr.pTyr.Glu.Thr.Leu.NH₂
(3) Ac-[pY ^{4,15}] IgE γ TAM 25mer [SEQ ID NO 4] Ac.Asp.Gly.Val.pTyr.Thr.Gly.Leu.Ser.Thr.Arg.Asn.Gln.- Glu.Thr.pTyr.Glu.Thr.Leu.Lys.His.Glu.Lys.Pro.Pro.Gln.OH
(4) Ac-[pY ^{6,17}] IgE γ TAM 27mer [SEQ ID NO 5] Ac.Lys.Ser.Asp.Gly.Val.pTyr.Thr.Gly.Leu.Ser.Thr.Arg.Asn.Gln.- Glu.Thr.pTyr.Glu.Thr.Leu.Lys.His.Glu.Lys.Pro.Pro.Gln.OH
(5) [pY ^{4,15}]TCR ζ TAM 1 (19mer ζ_1) [SEQ ID NO 6] Ac.Asn.Gln.Leu.pTyr.Asn.Glu.Leu.Asn.Leu.Gly.Arg.Arg.Glu.- Glu.pTyr.Asp.Val.Leu.Asp.NH₂

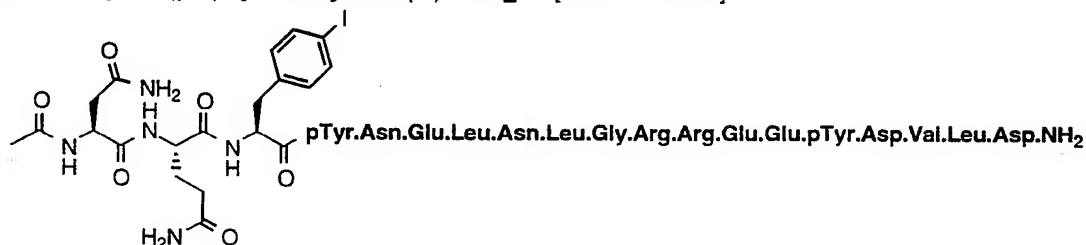
(6) Ac-pY[3,15]-Nle[11]-NH₂ (19mer ζ_2) [SEQ ID NO 7]

**Ac.Gly.Leu.pTyr.Asn.Glu.Leu.Gln.Lys.Asp.Lys.Nle.Ala.Glu.-
Ala.pTyr.Ser.Glu.Ile.Gly.NH₂**

(7) Ac-pY[4,15]-TCR ζ_3 [SEQ ID NO 8]

**Ac.Asp.Gly.Leu.pTyr.Gln.Gly.Leu.Ser.Thr.Ala.Thr.Lys.Asp.-
Thr.pTyr.Asp.Ala.Leu.His.NH₂**

(8) Ac-[Phe(p-I)³]-TCR ζ TAM(1)-NH₂ [SEQ ID NO 9]



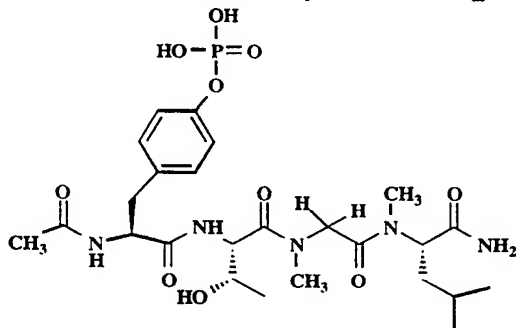
(9) Ac-F₂Pmp[4, 15] - ζ_1 NH₂ [SEQ ID NO 10]

**Ac.Asn.Gln.Leu.F₂Pmp.Asn.Glu.Leu.Asn.Leu.Gly.Arg.Arg.Glu.-
Glu.F₂Pmp.Asp.Val.Leu.Asp.NH₂**

(10) IgE γ analog [SEQ ID NO 11]

Ac.Asp.Gly.Val.pTyr.Thr.Gly.Leu.Ala.Ala.Ala.Ala.pTyr.Glu.Thr.Leu.Lys.NH₂

(11) Ac-pY-Thr-nmGly-nmLeu-NH₂ [SEQ ID NO 13]



Notes:

(a) Ligands (1), (5) - (10) and (11) co-crystallized with ZAP-NC. Of those, (5), (7), (8) and (9) formed dimeric crystals, i.e., containing two ligand:ZAP-NC complexes per asymmetric unit. (1), (5), (6) and (10) formed crystals containing one ligand:ZAP-NC (containing lead) per asymmetric unit. (1) - (5) co-crystallized with SYK-NC, with several molecules of complex per asymmetric unit.

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: ARIAD PHARMACEUTICALS, INC.
- (ii) TITLE OF INVENTION: CRYSTALLINE ZAP-FAMILY PROTEINS
- (iii) NUMBER OF SEQUENCES: 25
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: David L. Bernstein,
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 - (B) STREET: 26 Landsdowne Street
 - (C) CITY: Cambridge
 - (D) STATE: Massachusetts
 - (E) COUNTRY: USA
 - (F) ZIP: 02139-4234
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: PCT/US96/13918
 - (B) FILING DATE: 30-AUG-1996
 - (C) CLASSIFICATION:
- (vii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 60/002,972
 - (B) FILING DATE: 30-AUG-1995
- (viii) PRIOR APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 60/003,312
 - (B) FILING DATE: 06-SEP-1995
- (ix) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: BERSTEIN, David L.
 - (B) REGISTRATION NUMBER: 31,235
 - (C) REFERENCE/DOCKET NUMBER: 347C-PCT
- (x) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 617-494-0400
 - (B) TELEFAX: 617-494-0208

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Tyr Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa Leu
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(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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- (A) NAME/KEY: Modified-site
- (B) LOCATION: 1
- (D) OTHER INFORMATION: /product= "Acetylated"

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- (B) LOCATION: 4
- (D) OTHER INFORMATION: /product= "phosphotyrosine"

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/note= "phosphorylated tyrosine"

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/label= NH2

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Glu Thr Leu Lys

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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 (A) LENGTH: 25 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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1				5					10					15	

Thr Leu Lys His Glu Lys Pro Pro Gln
 20 25

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(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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- (A) NAME/KEY: Modified-site
- (B) LOCATION: 1
- (D) OTHER INFORMATION: /product= "Acetylated"

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(i) SEQUENCE CHARACTERISTICS:

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- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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Val Leu Asp															

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 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

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(ix) FEATURE:
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1				5					10					15	

Glu Ile Gly

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(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Asp	Gly	Leu	Tyr	Gln	Gly	Leu	Ser	Thr	Ala	Thr	Lys	Asp	Thr	Tyr	Asp
1				5					10					15	

Ala Leu His

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 16 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 1
 (D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 1
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 3
 (D) OTHER INFORMATION: /product= p-Iodo-L-
Phenylalanine"
/label= pI-Phe

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 12
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 16
 (D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Asn	Gln	Xaa	Tyr	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu	Glu	Tyr	Asp
1				5					10					15	
Val Leu Asp															

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 19 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "difluorophosphono methyl
phenylalanine"

/label= F2Pmp

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 15

(D) OTHER INFORMATION: /product= "difluorophosphono methyl
phenylalanine"

/label= F2Pmp

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 19

(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Asn	Gln	Leu	Phe	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu	Glu	Phe	Asp
1				5					10					15	

Val Leu Asp

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 16 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 12

(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 16
(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Asp	Gly	Val	Tyr	Thr	Gly	Leu	Ala	Ala	Ala	Ala	Tyr	Glu	Thr	Leu	Lys
1				5					10					15	

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 1
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Tyr	Xaa	Xaa	Leu
1			

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 1
(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 1
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

```
(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION: 3
      (D) OTHER INFORMATION: /product= "N-methyl glycine"
/label= nmGly
```

```
(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION: 4
      (D) OTHER INFORMATION: /product= "N-methyl leucine"
/label= nmLeu
```

```
(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION: 4
      (D) OTHER INFORMATION: /product= "Amidated"
/label= NH2
```

(xi) SEQUENCE DESCRIPTION: SEO ID NO:13:

Tyr Thr Gly Leu
1

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

```
(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION: 4
      (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"
```

```
(ix) FEATURE:
      (A) NAME/KEY: Modified-site
      (B) LOCATION: 15
      (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"
```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
1 5 10 15

Val Leu Asp

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 4
- (D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

/note= "phosphorylated tyrosine"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 15
- (D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

/note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Asn	Gln	Leu	Tyr	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu	Glu	Tyr	Asp
1				5					10					15	

Val Leu Asp

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 22 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 1
- (D) OTHER INFORMATION: /product= "Acetylated"

/label= Ac

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 7
- (D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

/note= "phosphorylated tyrosine"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 18
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
 /label= TyrPO4
 /note= "phosphorylated tyrosine"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 22
 (D) OTHER INFORMATION: /product= "Amidated"
 /label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Lys	Gly	Gly	Asn	Gln	Leu	Tyr	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu
1				5				10					15		
Glu Tyr Asp Val Leu Asp															
20															

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 19 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 15
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
 /label= TyrPO4
 /note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Asn	Gln	Leu	Tyr	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu	Glu	Tyr	Asp
1				5				10					15		
Val Leu Asp															

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 22 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 1
 (D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 18
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
/note= "phosphorylated tyrosine"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 22
 (D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Lys	Gly	Gly	Asn	Gln	Leu	Tyr	Asn	Glu	Leu	Asn	Leu	Gly	Arg	Arg	Glu
1			5					10						15	
Glu Tyr Asp Val Leu Asp															
20															

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 19 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 4
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
/note= "phosphorylated tyrosine"

(ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 15
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
/note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Asp	Gly	Val	Tyr	Thr	Gly	Leu	Ser	Thr	Arg	Asn	Gln	Glu	Thr	Tyr	Glu
1			5					10						15	
Thr Leu Lys															

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 22 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 1
 (D) OTHER INFORMATION: /product= "Acetylated"
 /label= Ac
- (ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 7
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
 /label= TyrPO4
 /note= "phosphorylated tyrosine"
- (ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 18
 (D) OTHER INFORMATION: /product= "phosphotyrosine"
 /label= TyrPO4
 /note= "phosphorylated tyrosine"
- (ix) FEATURE:
 (A) NAME/KEY: Modified-site
 (B) LOCATION: 22
 (D) OTHER INFORMATION: /product= "Amidated"
 /label= NH2
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:
- | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gly | Gly | Asp | Gly | Val | Tyr | Thr | Gly | Leu | Ser | Thr | Arg | Asn | Gln | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Thr | Tyr | Glu | Thr | Leu | Lys | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | |
- (2) INFORMATION FOR SEQ ID NO:21:
- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 98 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (v) FRAGMENT TYPE: internal
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:
- | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Tyr | Phe | Gly | Lys | Ile | Thr | Arg | Arg | Glu | Ser | Glu | Arg | Leu | Leu | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | | | | | | | | | | | | | | | |
| Asn | Pro | Glu | Asn | Pro | Arg | Gly | Thr | Phe | Leu | Val | Arg | Glu | Ser | Glu | Thr |
| 20 | | | | 25 | | | | 30 | | | | | | | |

Thr Lys Gly Ala Tyr Cys Leu Ser Val Ser Asp Phe Asp Asn Ala Lys
 35 40 45
 Gly Leu Asn Val Lys His Tyr Lys Ile Arg Lys Leu Asp Ser Gly Gly
 50 55 60
 Phe Tyr Ile Thr Ser Arg Thr Gln Phe Asn Ser Leu Gln Gln Leu Val
 65 70 75 80
 Ala Tyr Tyr Ser Lys His Ala Asp Gly Leu Cys His Arg Leu Thr Thr
 85 90 95
 Val Cys

(2) INFORMATION FOR SEQ ID NO:22:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 98 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Trp Phe Phe Lys Asn Leu Ser Arg Lys Asp Ala Glu Arg Gln Leu Leu
 1 5 10 15
 Ala Pro Gly Asn Thr His Gly Ser Phe Leu Ile Arg Glu Ser Glu Ser
 20 25 30
 Thr Ala Gly Ser Phe Ser Leu Ser Val Arg Asp Phe Asp Gln Asn Gln
 35 40 45
 Gly Glu Val Val Lys His Tyr Lys Ile Arg Asn Leu Asp Asn Gly Gly
 50 55 60
 Phe Tyr Ile Ser Pro Arg Ile Thr Phe Pro Gly Leu His Glu Leu Val
 65 70 75 80
 Arg His Tyr Thr Asn Ala Ser Asp Gly Leu Cys Thr Arg Leu Ser Arg
 85 90 95
 Pro Cys

(2) INFORMATION FOR SEQ ID NO:23:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 97 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

```

Trp Phe His Pro Asn Ile Thr Gly Val Glu Ala Glu Asn Leu Leu Leu
1           5           10           15
Thr Arg Gly Val Asp Gly Ser Phe Leu Ala Arg Pro Ser Lys Ser Asn
          20           25           30
Pro Gly Asp Phe Thr Leu Ser Val Arg Arg Asn Gly Ala Val Thr His
          35           40           45
Ile Lys Ile Gln Asn Thr Gly Asp Tyr Tyr Asp Leu Tyr Gly Gly Glu
          50           55           60
Lys Phe Ala Thr Leu Ala Glu Leu Val Gln Tyr Tyr Met Glu His His
65           70           75           80
Gly Gln Leu Lys Glu Lys Asn Gly Asp Val Ile Glu Leu Lys Tyr Pro
          85           90           95
Leu

```

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 93 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

```

Phe Phe Tyr Gly Ser Ile Ser Arg Ala Glu Ala Glu Glu His Leu Lys
1           5           10           15
Leu Ala Gly Met Ala Asp Gly Leu Phe Leu Leu Arg Gln Cys Leu Arg
          20           25           30
Ser Leu Gly Gly Tyr Val Leu Ser Leu Val His Asp Val Arg Phe His
          35           40           45
His Phe Pro Ile Glu Arg Gln Leu Asn Gly Thr Tyr Ala Ile Ala Gly
          50           55           60
Gly Lys Ala His Cys Gly Pro Ala Glu Leu Cys Glu Phe Tyr Ser Arg
65           70           75           80
Asp Pro Asp Gly Leu Pro Cys Asn Leu Arg Lys Pro Cys
          85           90

```

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 92 amino acids

(B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Trp	Tyr	His	Ser	Ser	Leu	Thr	Arg	Glu	Glu	Ala	Glu	Arg	Lys	Leu	Tyr	1	5	10	15
Ser	Gly	Ala	Gln	Thr	Asp	Gly	Lys	Phe	Leu	Leu	Arg	Pro	Arg	Lys	Glu	20	25	30	
Gln	Gly	Thr	Tyr	Ala	Leu	Ser	Leu	Ile	Tyr	Gly	Lys	Thr	Val	Tyr	His	35	40	45	
Tyr	Leu	Ile	Ser	Gln	Asp	Lys	Ala	Gly	Lys	Tyr	Cys	Ile	Pro	Glu	Gly	50	55	60	
Thr	Lys	Phe	Asp	Thr	Leu	Trp	Gln	Leu	Val	Glu	Tyr	Leu	Lys	Leu	Lys	65	70	75	80
Ala	Asp	Gly	Leu	Ile	Tyr	Cys	Leu	Lys	Glu	Ala	Cys	85	90						

(b) The standard triple and single letter codes for abbreviating the names of amino acids are used, i.e., Alanine (Ala, A); Arginine (Arg, R); Asparagine (Asn, N); Aspartic Acid (Asp, D); Cysteine (Cys, C); Glutamine (Gln, Q); Glutamic Acid (Glu, E); Glycine (Gly, G); Histidine (His, H); Isoleucine (Ile, I); Leucine (Leu, L); Lysine (Lys, K); Methionine (Met, M); Phenylalanine (Phe, F); Proline (Pro, P); Serine (Ser, S); Threonine (Thr, T); Tryptophan (Trp, W); Tyrosine (Tyr); and Valine (Val, V). The following terms are also abbreviated: phosphotyrosine (pTyr, pY), difluorophosphonomethylphenylalanine (F₂Pmp), Fluorenylmethyloxycarbonyl (Fmoc), N-methyl (nm) and acetyl (Ac)

Data Collection

Diffraction data were collected with an Rigaku R-Axis II area detector with graphite monochromated Cu K α X-rays. Diffraction data were collected as 2° oscillation images and reduced to integrated intensities with DENZO.⁴³ Scaling parameters for each image were calculated with ROTAVATA⁴⁴ and applied with AGROVATA.⁴⁴ Data sets were collected for all SYK and ZAP crystals (with and without bound ligands) at -160°C except for those collected at room temperature for crystals containing ZAP-NC protein containing lead.

MIR Analysis and Refinement

SeMet ZAP-NC was crystallized with TML under the same conditions and data collected. Positions of the lead and selenium atoms were determined from the difference Patterson function.

Anomalous dispersion measurements were included for both datasets. Heavy atom parameters were refined, and phases were obtained at 2.8 Å with the program MLPHARE.⁴⁴ The MIR phases

- 15 were improved with the program DM⁴⁴ with a combination of solvent flattening/histogram mapping and phase extension to 2.0 Å. Electron density maps with MLPHARE and DM phases were calculated, and the polypeptide chain model was built with the program O⁴⁵. SIGMAA⁴⁴ was used to perform several cycles of phase combination using partial model and experimental phases. Least squares refinement with simulated annealing was done using X-PLOR.⁴⁶ The
- 20 current model has all residues from Asp 3 to Asn 256 of the protein, all 19 peptide residues of zeta-1, and 113 water molecules, plus one lead and three selenium atoms. TML is bound to Cys 117. See Table 2.

Structural Coordinates, Their Storage and Use

- 25 The structural coordinates of crystalline compositions of this invention may be obtained as described in detail herein. By way of example, Appendix I, Appendix II and Appendix III set forth the structural coordinates, in PDB format, for crystalline compositions comprising ZAP-NC: ζ 1 "monomer" (one molecule of complex per unit cell), ZAP-NC: ζ 2, and ZAP-NC: ζ 1 "dimer" (two molecules of complex per unit cell).

30

This invention encompasses crystalline compositions containing a ZAP family protein having a region characterized by structural coordinates set forth in Appendices I, II or III, or by coordinates having a root mean square deviation therefrom of less than about 1.5 Å, preferably

less than about 1 Å, and even more preferably less than about 0.5 Å, with respect to backbone atoms of amino acid residues listed there.

TABLE 2: Statistics for data collection, phase determination, and refinement for ZAP-NC: ζ1 "monomer"

Data	Collection Resolution (Å)	Reflections (N)	Completeness (%)	Rsym (%)	Rc	FOM	Phasing Power (20-2.8 Å)
TML	25 - 2.5	15,506	98.3	6.3			
SeMet TML	25 - 2.9	23,978	98.9	4.9	0.71	0.50	1.38
Refinement							
Model 272 residues, 113 water molecules, 1 lead, 3 selenium atoms							
	Resolution	Reflections (F > 2σ)	R-value (%)	Free R-value* (%)	Rms deviations		
					Bonds (Å)	Angles (°)	
	10 - 1.9	23,697	20.9	25.5	0.006	1.58	

***Notes:**

$$R_{\text{sym}} = \sum |I_i - \langle I \rangle| / \sum I_i \times 100 .$$

$$R_c = \sum ||F_{\text{ph}} \pm F_p| - F_{\text{hcalc}}| / \sum |F_{\text{ph}} \pm F_p| \text{ for centric reflections.}$$

Phasing power, F_h/E where E = rms lack of closure error.

FOM = Figure of merit

$$R_{\text{value}} = \sum ||F_{\text{obs}}| - |F_{\text{calc}}|| / \sum |F_{\text{obs}}| \times 100.$$

subset of data (10%) was excluded from refinement and used for free

R-value calculation. All data with $F > 2\sigma$ were used for refinement.

- 5 As practitioners in this art will appreciate, various computational analyses may be used to determine the degree of similarity between the three dimensional structure of a given protein (or a portion or complex thereof) and ZAP-NC or another ZAP family protein or portion or complex thereof such as are described herein. Such analyses may be carried out with commercially available software applications, such as the Molecular Similarity application of
- 10 QUANTA (Molecular Simulations Inc., Waltham, MA) version 3.3, and as described in the accompanying User's Guide, Volume 3 pgs. 134 - 135.

- The Molecular Similarity application permits comparisons between different structures, different conformations of the same structure, and different parts of the same structure. The
- 15 procedure used in Molecular Similarity to compare structures is divided into four steps: (1) load the structures to be compared; (2) define the atom equivalences in these structures; (3) perform a fitting operation; and (4) analyze the results.

Each structure is identified by a name. One structure is identified as the target (i.e., the fixed structure); all remaining structures are working structures (i.e., moving structures). Since atom equivalency within QUANTA is defined by user input, for the purpose of this invention we define equivalent atoms as protein backbone atoms (N, C α , C and O) for all conserved residues
5 between the two structures being compared and consider only rigid fitting operations.

When a rigid fitting method is used, the working structure is translated and rotated to obtain an optimum fit with the target structure. The fitting operation uses a least squares fitting algorithm that computes the optimum translation and rotation to be applied to the moving
10 structure, such that the root mean square difference of the fit over the specified pairs of equivalent atom is an absolute minimum. This number, given in angstroms, is reported by QUANTA.

For the purpose of this invention, any set of structural coordinates of a ZAP family protein,
15 portion of a ZAP family protein or molecular complex thereof that has a root mean square deviation of conserved residue backbone atoms (N, C α , C, O) of less than 1.5Å when superimposed—using backbone atoms—on the relevant structural coordinates of a protein or complex of this invention, e.g. the coordinates listed in Appendix I, Appendix II or Appendix III, are considered identical. More preferably, the root mean square deviation is less
20 than 1.0Å. Most preferably, the root mean square deviation is less than 0.5Å.

The term "root mean square deviation" means the square root of the arithmetic mean of the squares of the deviations from the mean. It is a way to express the deviation or variation from a trend or object. For purposes of this invention, the "root mean square deviation" defines the
25 variation in the backbone of a protein from the backbone of a protein of this invention, such as ZAP-NC, as defined by the structural coordinates of Appendix I, Appendix II or Appendix III and described herein.

The term "least squares" refers to a method based on the principle that the best estimate of a
30 value is that in which the sum of the squares of the deviations of observed values is a minimum.

In order to use the structural coordinates generated for a crystalline substance of this invention, e.g. the structural coordinates of ZAP-NC, ζ 1, ζ 2, or the various complexes as depicted in Appendix I, Appendix II or Appendix III, it is often necessary or desirable to
35 display them as, or convert them to, a three-dimensional shape, or to otherwise manipulate them. This is typically accomplished by the use of commercially available software such as a program which is capable of generating three-dimensional graphical representations of molecules or portions thereof from a set of structural coordinates.

By way of illustration, a non-exclusive list of computer programs for viewing or otherwise manipulating protein structures include the following:

- 5 Midas (University of California, San Francisco)
- MidasPlus (University of California, San Francisco)
- MOIL (Univeristy of Illinois)
- Yummie (Yale University)
- Sybyl (Tripos, Inc.)
- Insight/Discover (Biosym Technologies)
- 10 MacroModel (Columbia University)
- Quanta (Molecular Simulations, Inc.)
- Cerius (Molucular Simulations, Inc.)
- Alchemy (Tripos, Inc.)
- LabVision (Tripos, Inc.)
- 15 Rasmol (Glaxo Research and Development)
- Ribbon (University of Alabama)
- NAOMI (Oxford University)
- Explorer Eyechem (Silicon Graphics, Inc.)
- Univision (Cray Research)
- 20 Molscript (Uppsala University)
- Chem-3D (Cambridge Scientific)
- Chain (Baylor College of Medicine)
- O (Uppsala University)
- GRASP (Columbia University)
- 25 X-Plor (Molecular Simulations, Inc.; Yale University)
- Spartan (Wavefunction, Inc.)
- Catalyst (Molecular Simulations, Inc.)
- Molcadd (Tripos, Inc.)
- VMD (University of Illinois/Beckman Institute)
- 30 Sculpt (Interactive Simulations, Inc.)
- Procheck (Brookhaven National Laboratory)
- DGEOM (QCPE)
- RE_VIEW (Brunel University)
- Modeller (Birbeck College, University of London)
- 35 Xmol (Minnesota Supercomputing Center)
- Protein Expert (Cambridge Scientific)
- HyperChem (Hypercube)
- MD Display (University of Washington)
- PKB (National Center for Biotechnology Information, NIH)

ChemX (Chemical Design, Ltd.)
Cameleon (Oxford Molecular, Inc.)
Iditis (Oxford Molecular, Inc.)

- 5 For storage, transfer and use with such programs of structural coordinates for a crystalline substance of this invention, a machine-readable storage medium is provided comprising a data storage material encoded with machine readable data which, when using a machine programmed with instructions for using said data, e.g. a computer loaded with one or more programs of the sort identified above, is capable of displaying a graphical three-dimensional representation of
- 10 any of the molecules or molecular complexes described herein. Machine-readable storage media comprising a data storage material include conventional computer hard drives, floppy disks, DAT tape, CD-ROM, and other magnetic, magneto-optical, optical, floptical and other media which may be adapted for use with a computer.
- 15 Even more preferred is a machine-readable data storage medium that is capable of displaying a graphical three-dimensional representation of a molecule or molecular complex that is defined by the structural coordinates of a protein of the ZAP family, e.g. ZAP-NC or SYK-NC, or portion thereof, and in particular, structural coordinates of ZAP-NC:ζ1 or ZAP-NC:ζ2 set forth in Appendix I, Appendix II or Appendix III (or derivatives thereof such as zapNC-z1.pdb,
- 20 discussed elsewhere herein) \pm a root mean square deviation from the backbone atoms of the amino acids of such protein of not more than 1.5 Å. An illustrative embodiment of this aspect of the invention is a conventional 3.5" diskette, DAT tape or hard drive encoded with a data set, preferably in PDB format, comprising the coordinates of Appendix I, Appendix II or Appendix III.
- 25 In another embodiment, the machine-readable data storage medium comprises a data storage material encoded with a first set of machine readable data which comprises the Fourier transform of the structural coordinates set forth in Appendix I, Appendix II or Appendix III (or again, a derivative thereof), and which, when using a machine programmed with
- 30 instructions for using said data, can be combined with a second set of machine readable data comprising the X-ray diffraction pattern of a molecule or molecular complex to determine at least a portion of the structural coordinates corresponding to the second set of machine readable data.
- 35 FIG. 8 illustrates one version of these embodiments. The depicted system includes a computer A comprising a central processing unit ("CPU"), a working memory which may be, e.g., RAM (random-access memory) or "core" memory, mass storage memory (such as one or more disk drives or CD-ROM drives), one or more cathode-ray tube ("CRT") display terminals, one or

more keyboards, one or more input lines (IP), and one or more output lines (OP), all of which are interconnected by a conventional bidirectional system bus.

Input hardware B, coupled to computer A by input lines, may be implemented in a variety of ways. Machine-readable data of this invention may be inputted via the use of a modem or modems connected by a telephone line or dedicated data line L. Alternatively or additionally, the input hardware may comprise CD-ROM drives or disk drives D. In conjunction with the CRT display terminal, a keyboard may also be used as an input device.

Output hardware, coupled to computer A by output lines, may similarly be implemented by conventional devices. By way of example, output hardware may include a CRT display terminal for displaying a graphical representation of a protein of this invention (or portion thereof) using a program such as QUANTA as described herein. Output hardware might also include a printer, so that hard copy output may be produced, or a disk drive, to store system output for later use.

In operation, the CPU coordinates the use of the various input and output devices, coordinates data accesses from mass storage and accesses to and from working memory, and determines the sequence of data processing steps. A number of programs may be used to process the machine-readable data of this invention. Examples of such programs are discussed in reference to the computational methods of drug discovery as described herein. Specific references to components of the hardware system of FIG. 8 are included as appropriate throughout the following description of the data storage medium.

FIG. 9A shows a cross section of a magnetic data storage medium 100 which can be encoded with a machine-readable data that can be carried out by a system such as a system of FIG. 8. Medium 100 can be a conventional floppy diskette or hard disk, having a suitable substrate 101, which may be conventional, and a suitable coating 102, which may be conventional, on one or both sides, containing magnetic domains (not visible) whose polarity or orientation can be altered magnetically. Medium 100 may also have an opening (not shown) for receiving the spindle of a disk drive or other data storage device 24.

The magnetic domains of coating 102 of medium 100 are polarized or oriented so as to encode in a manner which may be conventional, machine readable data such as that described herein, for execution by a system such as a system of FIG. 8.

FIG. 9B shows a cross section of an optically-readable data storage medium 110 which also can be encoded with such machine-readable data, or set of instructions, which can be carried out by a system such as a system of FIG. 8. Medium 110 can be a conventional compact disk read only

memory (CD-ROM) or a rewritable medium such as a magneto-optical disk which is optically readable and magneto-optically writable. Medium 100 preferably has a suitable substrate 111, which may be conventional, and a suitable coating 112, which may be conventional, usually of one side of substrate 111.

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In the case of CD-ROM, coating 112 is reflective and is impressed with a plurality of pits 113 to encode the machine-readable data. The arrangement of pits is read by reflecting laser light off the surface of coating 112. A protective coating 114, which preferably is substantially transparent, is provided on top of coating 112.

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In the case of a magneto-optical disk, coating 112 has no pits 113, but has a plurality of magnetic domains whose polarity or orientation can be changed magnetically when heated above a certain temperature, as by a laser (not shown). The orientation of the domains can be read by measuring the polarization of laser light reflected from coating 112. The arrangement of the domains encodes the data as described above.

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C. Description of the Tertiary Structure of ZAP-NC: ζ_1

Solving the X-ray crystal structure of the tandem SH2 region of human ZAP-70 (ZAP-NC) in complex with a 19meric peptide derived from the sequence of the first ITAM of the ζ subunit (ζ_1) of the TCR allowed us to conduct the first three dimensional characterization of the protein:ligand complex. The complex involves an elaborate array of contacts between the peptide and both SH2 domains. The 65 residue inter-SH2 region exists as a coiled-coil of α -helices and assists in the formation of an interface between the two SH2 domains. The structure reveals the startling fact that *both* SH2 domains contribute to the recognition of phosphotyrosine in the second pYXXL motif. This work reveals the first structural insights into the SYK/ZAP family of protein tyrosine kinases and provides the first view of an intracellular component of the TCR.

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General Topology

The first 259 residue segment of ZAP-70 consists of two SH2 domains that are connected by a helical region. The overall fold is Y-shaped where the SH2 domains constitute each upper branch and the intervening 65 amino acid domain forms the stem. The fragment of ZAP-70 used in the crystal structure determination terminates before the kinase domain; therefore, we refer to the two SH2 regions as ZAP-N and ZAP-C, for ZAP N-terminal SH2 and ZAP C-terminal SH2, respectively. There is high structural similarity between each of the SH2 domains and those previously reported, e.g., v-Src¹³ and p56-Lck²⁰. Each of the individual ZAP SH2 domains possesses a central antiparallel β -sheet that is flanked by two α -helices. The inter-SH2 region begins as a β -strand that is a continuation of the central sheet of ZAP-N. This is followed by two antiparallel α -helices that intertwine to form a coiled-coil motif. The two

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SH2 domains are in a partially staggered orientation; the central β -sheets are separated by about 29 Å at an angle of ca. 52°. This arrangement allows direct contact between the two SH2 domains, which is a requisite for peptide binding. The central β -sheet in ZAP-C is extended by distinct hydrogen bonds with several residues in ZAP-N, including some side chain contacts.

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The ζ_1 peptide is extended over both faces of the SH2 domains, straddles both central β -sheets, and makes extensive contacts with the protein surface. The binding orientation is head to tail, that is, the N-terminus of the peptide is in contact with the C-terminal SH2 domain. The N-terminal pYXXL segment of the peptide is bound to ZAP-C in a conformation similar to that seen for singly-phosphorylated peptides bound to isolated SH2 domains.^{20, 21} The peptide segment that separates the two pYXXL motifs is largely in contact with ZAP-C. The C-terminal phosphotyrosine is bound in a pocket that is formed by contributions from both SH2 domains. The remainder of the second pYXXL motif is bound in a fashion similar to the first motif and in other complexes.^{20, 21}

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The ZAP SH2 domains

All residues between Asp 3 - Asn 256 are in good electron density, with no breaks. Residues Gln 2 to Leu 18 of the ζ_1 peptide reside in good density, and the two terminal residues are in weak, but observable density. The nomenclature defined previously²⁰ for structural features of SH2 domains is used here for clarity. For the N-terminal SH2 domain (ZAP-N), the secondary structural elements are conserved but are slightly longer for strands A, E, F, and G. Due to the elongation of these strands, the sequence corresponding to a minor β -sheet (observed in previously reported SH2 domains) is an integral part of the central β -sheet in ZAP-N. More notably, helix A is longer by three residues, which extends the helix nearly a full turn. The C-terminal SH2 domain of ZAP (ZAP-C) also possesses minor extensions to several secondary structural elements. Strands B, C, and E are longer by one or two residues. Helix A is also extended by a single residue. Strand F consists of only two residues and replaces the FB loop. The BC loop of ZAP-C is extended. There is very strong electron density for a number of structural waters, both within each SH2 domain and in all domain interfaces. The existence of a large number of observed waters in the phosphotyrosine binding pockets is unique to ZAP-NC.

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The Helical Interdomain A

The inter-SH2 spacer begins in a type II reverse turn followed by a long β -strand that makes significant contact to strand A of ZAP-N, thus forming an extension to the central β sheet. Hydrogen bonds exist between main chain atoms of Gln 111 and Tyr 12 and between Gln 111 and Ser 14. A water-mediated contact exists between the main chain atoms of Glu 109 and Tyr 12. In addition to the hydrogen bonds, hydrophobic packing exists between Leu 108 and Tyr 12 and between Pro 110 and Phe 11.

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This segment is followed by a five-turn α -helix (designated helix C) that extends away from both SH2 domains, forming the stem of the overall Y shape of ZAP-NC. This helix is followed by a turn consisting of Leu 133 and Glu 134. A second α -helix (helix D) curves around the axis formed by helix C. Helix D is distorted, with a break at Pro 147; a second break occurs at Ala 154 which precedes a short 3_{10} -helix that spans residues Thr 155 - Met 161. Helices C and D both make several hydrophobic contacts to ZAP-C, most notably a p-stacked arrangement of Phe 115 (α C) to Trp 233. Several water-mediated hydrogen bonds exist between helix D and ZAP-C. These antiparallel helices form a coiled-coil structure, with direct contact between several hydrophobic residues forming its core.

For proteins that contain multiple SH2 domains, the region separating the two domains is highly variable in length. This region may be as short as 10-15 residues (e.g., PLC- γ 1, SHPTP-1 and -2), which would force the two SH2 domains into a back-to-back orientation. SYK has an inter-SH2 domain region which is of comparable length to that of ZAP, exhibits 68% sequence identity to the helical spacer described here. It should maintain the same overall conformation observed in ZAP-NC. The tandem SH2 domains of the p85 subunit of phosphatidylinositol 3' kinase (PI 3-K) are connected by a significantly larger domain of 163 residues which has been predicted to also form a coiled coil of two antiparallel α -helices.²²

20 ***Binding Interactions for the Complexed ζ_1 Peptide***

The ZAP-NC: ζ_1 complex includes a 19 amino acid peptide that is phosphorylated on both tyrosine residues and is based on the first ITAM-containing segment of the human TCR ζ chain (ζ_1) which has the sequence NQLpYNELNLGRREEpYDVLD [SEQ ID NO 14]. For clarity, numbering for peptide residues begins at ζ Asn 1. The bound conformation of the ζ_1 peptide is largely extended, although nearly one full α -helical turn exists between residues ζ Asn 8 and ζ Arg 12. The backbone conformation for each pYXXL motif is similar to conformations observed for high affinity complexes of SH2 domains with singly-phosphorylated peptides.^{20, 21, 23}

All residues of the ζ_1 peptide, except for ζ Gly 10, are in contact with ZAP-NC. The area of the peptide-protein interface is over 1300Å². Although this interface area is typical for protein-protein interactions, the nature of the contacts is quite different from those generally observed.²⁴ For example, interfaces in antibody-antigen complexes and protease:protein-inhibitor complexes usually contain few bridging waters. The interaction of ZAP-NC with ζ_1 includes 21 bridging waters. The majority of contacts in protein-protein interfaces are usually classified as hydrophobic. In contrast, half of the contacts between ZAP-NC and ζ_1 are due to direct hydrogen bonds. The total number of contacts observed is considerably larger than is observed for protein-protein structures of similar interfacial areas. Binding of phosphorylated peptides to individual SH2 domains has been described as reminiscent of a "socket and plug";²¹ this general arrangement is also present in ZAP-C and ZAP-N. Each socket consists of a highly

charged pocket that recognizes phosphotyrosine residues and a second pocket that prefers hydrophobic residues at the pY+3 position.

Binding of Motif-1 (-pYNEL-) is Exclusive to ZAP-C

- 5 The amino terminal pYXXL motif of $\zeta 1$ is associated exclusively with ZAP-C. The first two residues of $\zeta 1$, ζ Asn 1 and ζ Gln 2, are largely involved in intrapeptide interactions. The single contact between ζ Leu 3 and ZAP-NC, a hydrogen bond between the main chain carbonyl of ζ Leu 3 and NH1 of Arg 170, is typical for the pY-1 residue.
- 10 The pocket for ζ pTyr 4 is formed by residues from helix A, strands B, C, and D, and the BC loop. Hydrophobic contacts involve residues from β D, from which His 210, Tyr 211, and Leu 212 form one edge of the pTyr cavity. In addition, ζ Asn 1 and ζ Gln 2 of the peptide itself form hydrophobic contacts on the opposing side. The side chain of Leu 212 is twisted away from the pTyr ring and is packed against Trp 131 from a symmetry-related molecule. This neighboring
- 15 Trp, which constitutes the only intermolecular crystal contact with any $\zeta 1$ residue, is also in hydrophobic contact to ζ pTyr 4. Direct hydrogen-bonding contacts to the phosphate are made by only three residues. Arg 170 (α A) and Arg 190 (β B) interact through their terminal nitrogens. Arg 192 is the only residue in the BC loop of sufficient length for direct hydrogen bonding to the phosphate group and interacts via its N ϵ . The BC loop is extended; thus, the pTyr
- 20 binding region resembles a deep groove that continues toward the AA loop. The inclusion of the pY-2 and pY-3 residues as an integral part of the binding site results in the formation of a channel into which the pTyr protrudes. Five waters with very strong density and low temperature factors exist in this region and are part of a large hydrogen-bonding network.
- 25 As is typical for complexes with SH2 domains,^{20, 21, 23} the pY+1 and pY+2 residues are extended along the surface of the protein. The pY+1 residue (ζ Asn 5) makes contacts that are similar to those observed in the hamster middle T peptide (...pYEEI...) in complex with the SH2 domains of Lck²⁰ and v-Src.²¹ The pY+2 residue (ζ Glu 6) is directed away from the surface of the protein.
- 30 The pocket that surrounds ζ Leu 7 (pY+3) is very deep and is formed by residues from β D, the EF loop, helix B and the BG loop. Due to the size of this pocket, ζ Leu 7 is directly contacted by only 5 residues -- Tyr 211, Ile 223, Gly 226, Gly 245, and Leu 246. The depth of this pocket is partially due to the presence of a leucine in helix B in ZAP-C that is occupied by a tyrosine in
- 35 many other SH2 domains.²³ Even in the absence of tyrosine, very strong density is observed for two waters near this site. The main chain of ζ Leu 7 is involved in a water-mediated hydrogen bond to the carbonyl oxygen of Pro 224. A second contribution to the overall shape of the pY+3 pocket is provided by a repositioning of the β turn in the EF loop. In complexes of isolated SH2 domains, this loop is involved in forming the steep solvent-exposed wall of the

pocket. In ZAP-C, the EF loop slides toward strand D to allow the remainder of the peptide to continue on its path toward ZAP-N.

Binding of Intermotif (-NLGRREE-)

- 5 The peptide segment that separates the pYXXL motifs in ζ_1 consists of seven amino acids which make the bulk of their contacts to ZAP-C. Since nearly a full turn of an α -helix begins at ζ Asn 8 and continues to ζ Arg 12, many contacts for this sequence are intrapeptide. ζ Asn 8 makes a main chain hydrogen bond to the carbonyl oxygen of Gly 245 (BG), and ζ Arg 12 is involved in both direct and water-mediated hydrogen bonds to the backbone carbonyl of Glu 225 (EF loop);
- 10 two other water-mediated hydrogen bonds connect ζ Arg 12 to Gly 226 and Lys 228. The side chains of ζ Leu 9 and ζ Arg 12 close off the pY+3 pocket of ZAP-C.

- Two glutamate residues complete this segment of the ζ_1 peptide, and because they are the pY-1 and pY-2 residues of the second pYXXL motif, they constitute the first contacts to ZAP-N. ζ Glu
- 15 13 makes a main chain hydrogen bond to the backbone carbonyl of Asp 244. More interestingly, ζ Glu 13 is involved in a direct hydrogen bond through its side chain carboxyl to the side chain amino group of Lys 242 (ZAP-C α B) which is an integral part of the phosphotyrosine pocket of the N-terminal SH2 domain. ζ Glu 13 also maintains van der Waals contact to Lys 242, as well as to Tyr 238 (ZAP-C α B) and the guanidinium group of Arg 17 (ZAP-N α A), which also
- 20 contribute to the N-terminal pY pocket. ζ Glu 14 maintains the characteristic pY-1 main chain carbonyl hydrogen bond to both terminal nitrogens of Arg 17 which, in turn, contacts the aromatic ring and phosphate group of ζ pTyr 15.

Binding of Motif-2 (-pYDVL-) Requires Both Domains

- 25 Perhaps the most remarkable feature of the complex between ZAP-NC and ζ_1 is the observation that the recognition pocket of ζ pTyr 15 is composed of residues from both SH2 domains. This is the first report of a phosphotyrosine binding site of this nature. The impinging of ZAP-C on ZAP-N sequesters ζ pTyr 15 in a deep tunnel. The side chain of ζ pTyr 15 makes van der Waals contacts to Arg 41 (BC loop), Val 47 (β C), His 58 (β D), and Pro 60 (β D). The side chain of
- 30 Arg 17 is positioned over the aromatic ring of ζ pTyr 15, forming an amino-aromatic contact in addition to bridging the carbonyl of the pY-1 residue to the phosphate oxygens of ζ pTyr 15. The phosphate group is closely associated with the side chains of Tyr 238 (ZAP-C α B), Lys 242 (ZAP-C α B), Arg 17 (α A), and Arg 37 (β B), forming a total of six direct hydrogen bonds. Six water-mediated hydrogen bonds exist between the phosphate group and Arg 17 (α A), Cys 39 (β
- 35 C), Leu 40 (BC loop), Arg 41 (BC loop), and Lys 242 (ZAP-C α B). The relative importance of each residue in this interface may be determined through mutagenesis experiments. Four waters with strong electron density contribute to this extensive network; the presence of these waters may be a consequence of the intrusion of ZAP-C onto residues of the BC loop (*vide infra*).

In this arrangement, each oxygen of the phosphate group possesses its full complement of hydrogen-bonding partners.

As described for the first pYXXL motif, the pY+1 and pY+2 residues (ζ Asp 16 and ζ Val 17) make contacts that are characteristic for these positions in other SH2 complexes.^{20, 21, 23} ζ Leu 18 resides in a hydrophobic pocket that is of similar dimension to the pY+3 pockets observed in high affinity peptide complexes with Src family SH2 domains. A single water-mediated hydrogen bond connects the main chain NH of ζ Leu 18 to the carbonyl of Ala 72 on the EF loop. Contact to several hydrophobic residues is evident: β D contributes Phe 59; interaction with the EF loop involves Ile 71, Ala 72, Gly 73, and Gly 74; helix B presents Tyr 87; and the BG loop makes contact via Gly 93 and Leu 94. Asp 19 of ζ_1 resides in weaker density and appears to form only one hydrogen bond from its main chain nitrogen to the carbonyl of Gly 93 (BG loop).

15 ***Interdomain Contacts***

Unlike the extensive contact area of ζ_1 to ZAP-NC, the total interaction area between the ZAP-N and ZAP-C SH2 domains is small, measuring only ca. 200 Å². The surface area of ZAP-N that is buried by ZAP-C and the inter-SH2 spacer is only about 400 Å²; the corresponding buried area in ZAP-C is not significantly larger. Total burial of ZAP-N in the full complex is 620 Å² which accounts for approximately 13% of the total surface area of the domain. Conversely, burial of ZAP-C is computed to be ca. 1000 Å² which constitutes 20% of its total surface area. This difference is due to the presence of a large solvent accessible channel formed by the convergence of the convex side of the BC loop of ZAP-N, the FB loop and helix B of ZAP-C, and both helices of the inter-SH2 spacer. This irregularly shaped funnel has an approximate diameter of 5-7 Å, and extends fully enclosed for ca. 12 Å before flaring open for an additional 8 Å. For the interface that is exclusively between the ZAP-N and ZAP-C domains, each SH2 domain contributes nine residues. Most of the contacts are through hydrogen bonds, and most of these are water-mediated. However, some van der Waals contacts do exist.

Given that the total interface that is exclusive to the two SH2 domains may not exist in the absence of the peptide, the inter-SH2 spacer is likely to stabilize the appropriate orientation for tandem binding by permitting only minor displacements through scissoring or wagging motions. In isoelectric focusing gels, uncomplexed ZAP-NC exists as multiple bands which collapse into a single band when the ζ_1 peptide is added. This microheterogeneity observed with uncomplexed ZAP-NC is consistent with conformational variability.

Comparison to other SH2:phosphopeptide complexes

Despite the low sequence identity (33%) between ZAP-N and ZAP-C, the similarity in overall fold is notable. Side chain positions are remarkably well-conserved between the two domains.

The overall backbone root-mean-square (r.m.s.) deviation is 1.07 Å ; the same measurement for ZAP-N or ZAP-C to Src family SH2 domains (individually) is typically 1.50 Å, although the percentage of sequence identity is similar. As reported for previous structures of individual SH2 domains,^{14, 20, 21} the loop regions display the largest positional variance, most notably loops AA, BC, CD, and EF. The CD loops of both ZAP-N and ZAP-C have a large truncation relative to the SH2 domains of the Src family; this truncation is also evident from the sequences of a large number SH2 domains.²³

Although each pYXXL motif of ζ_1 resides in a similar backbone conformation in the complex, the orientation of the phosphotyrosines varies between ZAP-N and ZAP-C. The aromatic ring of ζ pTyr 4 superimposes remarkably well with the pTyr in both p56-Lck²⁰ and v-Src.²¹ For ζ pTyr 15, however, the ring is repositioned 0.7 Å toward the guanidinium of Arg 17 and slips 0.8 Å away from strand D. This is likely to be due to the direction ζ_1 takes as it moves into the ZAP-C domain, as well as the strong hydrogen-bonding interactions between the phosphate group and Tyr 238 and Lys 242 on ZAP-C. Both pTyr pockets of ZAP-NC are large enough to permit the inclusion of several waters; this enlargement relative to other SH2 domains is due to the repositioning of the BC loop. The extended position for the BC (phosphotyrosine binding) loop observed for both SH2 domains of ZAP has been observed previously for uncomplexed SH2 domains and has been described as a hinge in the binding of tyrosine phosphorylated and phosphonated peptides.^{14, 21} Although the loop is reoriented, the internal conformation for the BC loop is strongly maintained.

The pY+3 pocket of ZAP-C is strikingly large compared to this site in other SH2 domains. This is due, in part, to repositioning of ZAP-C EF residues Pro 224 and Glu 225, as described earlier. Aside from the absence of a Tyr in α B, the location of other side chains that form this pocket are notably similar to the corresponding sites in Lck and Src.

Also, in comparison with all other crystal structures of complexes of SH2 domains, a significant number of waters are present in ZAP-NC. Several are involved in bridging phosphotyrosine to the protein. These intervening water molecules may contribute to the weak affinity of individual ZAP SH2 domains for phosphorylated ITAM ligands.^{17-19, 25} Additionally, a large number of buried or trapped waters exist in all of the various interfaces.

Biological Significance

The structure of the tandem SH2 domains of ZAP-70 in complex with a component of the ζ chain of the T cell receptor provides the first molecular glimpse into the intracellular machinery of the TCR (summarized in FIG. 4). Several unique features of this structure suggest that each SH2 domain does not function as an independent module, and that interactions between the domains play a critical role in the recognition of phosphorylated ITAM sequences of the TCR by

ZAP-70. In addition, the structural information is key to the interpretation of genetic and biochemical data and provides a framework for exploring the mechanism of action of ZAP-70.

The tandem SH2 domains of ZAP-70 exhibit strong selectivity for the phosphorylated ζ and ϵ subunits of the TCR, while isolated SH2 domains from other proteins bind more promiscuously to many tyrosine phosphorylated proteins in total cell extracts.⁵ Ligand binding and selectivity for isolated SH2 domains is mediated by recognition of a phosphotyrosine and several residues C-terminal to phosphotyrosine, particularly the hydrophobic residue at the pY+3 position¹². The high degree of selectivity of ZAP-70 for doubly-phosphorylated ITAM sequences appears to be a consequence of multiple structural features. The distance between the two pYXXL motifs of the ζ or ϵ chain provides properly spaced partners for a pair of SH2 domains that are tethered in close association by an inter-SH2 coiled coil. Association of the pair of SH2 domains with the phosphotyrosines and other ITAM residues stabilizes a conformation that permits direct interaction between the domains and hence the formation of a deep pocket for sequestering one phosphotyrosine at the domain interface.

While ZAP-NC exhibits high affinity for doubly-phosphorylated ITAMS and selectivity for the ζ and ϵ chains, the individual SH2 domains of ZAP-70 have not been found to bind appreciably to phosphorylated peptides⁵. In addition, ZAP-NC binds to monophosphorylated ITAM-based peptides with affinities that are 100-1000 times lower than for the corresponding doubly-phosphorylated ones.^{17-19, 25} Consequently, for high-affinity binding, both SH2 domains must cooperate, and two phosphotyrosine residues must be present and arranged appropriately. The structural manifestation of this cooperativity and selectivity is also the most remarkable feature of the complex between ZAP-NC and ζ_1 , that is, the convergence of residues from both SH2 domains to enmesh pTyr 15.

To this point, it has been assumed that SH2 domains adopt their native fold when extracted from their natural molecular context and possess their full ability to recognize and bind to phosphorylated proteins.^{12, 14} We present structural evidence that the N-terminal SH2 domain of ZAP-70, if expressed in isolation, is incomplete. The groove-like nature of the pY pocket of ZAP-C suggests that this domain may also require contributions from neighboring domains or proteins.

From the crystal structure, we ascertain that the orientation adopted by ZAP-70 upon association with the TCR aligns ZAP-C with the N-proximal pYXXL motif of ζ_1 , and ZAP-N with the C-proximal motif, as depicted in FIG. 4. We believe that this orientation may be important for positioning the catalytic domain of ZAP-70 for its activation and subsequent phosphorylation of downstream substrates in the signal transduction cascade.

All of the ITAMs of the TCR have a spacing of seven residues between the pYXXL motifs, except ζ_2 which has a spacing of eight. *In vitro* binding experiments of ZAP-NC with synthetic phosphopeptides indicate that the binding hierarchy is $\zeta_1 \geq \zeta_2 > \epsilon \geq \zeta_3$.²⁵ These results suggest that one additional residue between the pYXXL motifs is tolerated. Conversely, a two amino-acid deletion in the corresponding region of ϵ drastically reduces ZAP-70 binding and eliminates IL-2 production.¹⁷ Therefore, the distance between the two pYXXL motifs is important for association and signaling. In order to determine the relative contribution of each residue in the ITAM, experiments utilizing CD8- ζ_1 chimeras were conducted, in which each residue was systematically replaced with alanine. The results demonstrate that only the replacement of each pY and pY+3 residue eliminates signaling completely, as measured by IL-2 production.²⁶ With the exception of these residues, the specific sequence of the ITAM is less important for selectivity than the distance between pYXXL motifs. More radical changes, such as the simultaneous replacement of multiple residues, are necessary to assess the contribution of ITAM sequences to selectivity.

As described earlier, the inter-SH2 region constrains the SH2 domains within a distance that permits association. However, because a significant portion of the antiparallel helices are directed away from the SH2 domains, this region may also be involved in inter- or intramolecular contacts, regulation of kinase activity, and/or receptor clustering. The evidence that this domain forms a coiled coil of α -helices is of great interest, since these structural units are commonly involved in protein-protein interactions.²⁷ The inter-SH2 region of the p85 subunit of PI 3-K, which has been predicted to form a coiled coil, is necessary and sufficient for interaction of p85 with the p110 catalytic subunit of PI 3-K.²² One intriguing possibility evident from our structure is that the ZAP interdomain is involved in regulation of its kinase activity. The interdomain may inhibit catalytic activity directly or indirectly, and this inhibition might be relieved upon binding of the SH2 domains to the ITAM. Experiments with PI 3-K²⁵ and SYK²⁸, the PTK homologous to ZAP-70, support such a model. Addition of a phosphotyrosine-containing peptide that corresponds to Tyr 751 region of a known PI-3K SH2 binding site from the PDGF β receptor causes activation of PI 3-K *in vitro*.²⁹ Likewise, phosphorylated ITAM peptides derived from the γ subunit of the IgE receptor increase SYK kinase activity by 5-10 fold.^{30, 31} Another function for the inter-SH2 region may be to bind to proteins that either regulate ZAP-70 activity, such as Lck and/or Fyn, or that are substrates for ZAP-70. Tyrosine 126 in the inter-SH2 region is phosphorylated by Lck *in vitro*³² and could be involved in interactions with other SH2 domain-containing proteins. Finally, the inter-SH2 domain may be important for the intermolecular association between ZAP-70 molecules which might occur in the activated TCR complex.

SYK should also exhibit these structural features in view of its functional similarities and sequence identity of 57% with respect to ZAP. SYK is expressed in several types of

hematopoietic cells and functions in mast cells and B cells by binding to ITAM sequences in the cytoplasmic domains of IgE and B cell receptors, respectively.²⁸ By comparing the ZAP-70 and SYK sequences,³³ most of the residues in ZAP-NC that contact pTyr 15 are conserved in the corresponding positions in SYK. The N-terminal SH2 domain of SYK does not bind to
5 phosphotyrosine ligands or to phosphotyrosine affinity columns,³⁴ which suggests that, as in ZAP-NC, this phosphotyrosine site also requires the C-terminal SH2 domain in order to form a complete pocket. Doubly-phosphorylated peptides derived from the γ ITAM of the IgE receptor induce SYK activation.³⁰ Our complex of ZAP-NC with ζ_1 may therefore represent the conformation of the SH2 domains adopted in the activated kinase.

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ZAP-70 has emerged as an attractive target for the development of safe and potent immunosuppressive drugs. ZAP-70 has been shown to be required for T cell-mediated immune responses in humans, and loss of ZAP-70 does not affect other tissues.⁸ Thus, ZAP antagonists would specifically inhibit T cells and avoid the toxicity of the currently used

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immunosuppressive drugs, FK506 and cyclosporin^{35,36}, which target the more ubiquitously expressed protein calcineurin.^{37, 38} This protein phosphatase is required for T cell immune responses, as well as functions in several other tissues, and as a consequence, cyclosporin and FK506 cause serious side effects in the kidney and central nervous system which limit their application largely to patients with organ transplant rejection.³⁶ New immunosuppressive

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drugs with less toxicity are needed to expand the routine use of such therapies to autoimmune diseases.

One approach to inhibition of T cell activation is to develop small (i.e., preferably having a molecular weight below about 1200, more preferably below about 750 and even more

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preferably below about 500), preferably non-peptidic, membrane permeant, molecules that bind to ZAP and prevent its association with the TCR. Such a compound may bind, preferably with high affinity, to either SH2 domain of ZAP-70 or to the inter-SH2 domain interaction. Our crystal structure reveals the molecular details of the three dimensional structure of ZAP and provides insights into its interactions with the TCR. The unique structural features of each SH2

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ligand binding site and the unanticipated inter-SH2 association now can be exploited for structure-based design of highly specific small molecule ZAP ligands and structurally biased compound libraries.

D. Use of three-dimensional Structure of ZAP-NC in solving the structures 35 of other tandem SH2 proteins

Having solved the ZAP-NC structure we contemplate that other proteins containing two SH2 domains, especially ZAP family members, will have this unique binding pocket formed by interdomain association and that it can be exploited for the design of interfering compounds. The

protein currently considered to be most closely related to ZAP is SYK. (see figure of sequence alignment). Using the structure of ZAP-NC, a three-dimensional model of Syk-NC can be obtained through homology modeling. Prior to solving the ZAP-NC structure, this would have been difficult if not impossible since the sequence identity between the SH2 domains of Syk and SH2 domains of known structure is low and none of the previously solved SH2 domains contain two SH2 domains. Other currently known proteins with tandem SH2 domains are PLC γ , PI3K, rasGAP, SH-PTP1, and SH-PTP2. Additional proteins with two SH2 domains are expected to be discovered through genome sequencing or other cloning methods.

10 E. Use of Structure in Drug Discovery

Utilization of the structure of the tandem SH2 domains of ZAP-70 in computer-aided drug design (CADD)

15 The availability of the three-dimensional structure of the tandem SH2 domains of the protein tyrosine kinase ZAP-70 (ZAP-NC) makes structure-based drug discovery approaches possible. Structure-based approaches include *de Novo* molecular design, computer-aided optimization of lead molecules, and computer-based selection of candidate drug structures based on structural criteria. New peptidomimetic modules may be developed directly from the structure of the peptide ligand by design or database searches for conformationally-restricted peptide replacements. Alternatively, structure-based lead discovery may be accomplished using the target protein structure stripped of its ligand. Multiple uncomplexed states of ZAP-NC can be generated by several methods to provide additional target conformations. The experimental coordinates and the resulting uncomplexed models can be subjected to techniques such as receptor site mapping to identify sites of favorable interaction energies between the structure of the target protein and potential ligands or chemical moieties ("fragments" or "seeds"). Such evaluation may be followed by procedures such as fragment seed linking and growth. Fragment seed linking refers to methods for designing structures that contain "linked" "seeds", i.e. chemical structures comprising two or more of the mapped moieties appropriately spaced to reach the respective sites of favorable interactions. Growth refers to the design of structures which extend, based on receptor site mapping or to fill available space, a given molecule or moiety. Based on the receptor site mapping data, one may also select potential ligands from databases of chemical structures. Potential ligands, or suboptimal ligands, of whatever source, can be refined by using the receptor site maps to filter multiple ligand conformations and orientations according to energetic preferences. Finally, in view of the high degree of sequence similarity to the tandem SH2 domains of p72^{Syk}, the structure of ZAP-NC permits one to generate a high-quality model of Syk-NC by either knowledge-based homology template methods or iterative site-mutations followed by minimizations. The generated structure of Syk-NC may

then be treated as an additional protein target by the methods outlined above. These methods and their application to ZAP-NC are described in the sections that follow.

Peptidomimetics of the ζ_1 peptide may be developed from the bound conformation of a peptide ligand by design, by searching databases for replacements of one or more peptide segments, or by enhancement of existing ligand-protein interactions (i.e., by replacing a component moiety of a ligand with a substitute moiety capable of greater interaction with the target protein, whether through accessible protein contact points or by extrusion of otherwise sequestered waters). Knowledge of the bound conformation of a peptide can suggest avenues for conformational restriction and peptide bond replacement. A less biased approach involves computer algorithms for searching databases of three dimensional structures to identify replacements for one or more portions of the peptide ligand, preferably non-peptidic replacement moieties. By this method, one can generate compounds for which the bioactive conformation is heavily populated, i.e., compounds which are based on particularly biologically relevant conformations of the peptide ligand. Algorithms for this purpose are implemented in programs such as Cast-3D (Chemical Abstracts Service), 3DB Unity (Tripos, Inc.), Quest-3D (Cambridge Crystallographic Data Center), and MACCS/ISIS-3D (Molecular Design Limited). These geometric searches can be augmented by steric searching, in which the size and shape requirements of the binding site are used to weed out hits that have prohibitive dimensions. Programs that may be used to synchronize the geometric and steric requirements in a search applied to ZAP-NC include CAVEAT (University of California, Berkeley), HOOK (MSI), and ALADDIN (Daylight Software). All of these searching protocols may be used in conjunction with existing corporate databases, the Cambridge Structural Database, or available chemical databases from chemical suppliers.

In addition to the retention of potential pharmacophoric elements that are present in the peptide explicitly, the incorporation into a ligand structure of hydrogen-bond donating or accepting groups that can displace ordered water molecules usually provides a significant entropic gain that leads to a favorable free energy of binding. Such ordered waters are identifiable from the structure, and other ordered waters may be located during computer simulations of a fully solvated structure, as described more thoroughly in a subsequent section.

Generation of alternate binding site conformations of the target protein may be desired in view of the flexibility of the phosphotyrosine binding region, the nature of the interface between the two SH2 domains, and overall, in view of the possibility of an induced fit, i.e., conformational changes in both ligand and protein upon binding. For example, the loop that connects β -strands B and C (the BC or phosphotyrosine binding loop) has been reported to act as a functional hinge in Src-family SH2 domains. In addition, charged residues in the phosphotyrosine binding pocket are capable of side chain reorientations. A variety of theoretical

methods, such as Metropolis Monte Carlo or molecular dynamics simulations (implemented in programs such as MCPro [Yale University], AMBER [UCSF], CHARMM [Harvard University], and GROMOS [ETH/Groningen]) may be used locally to generate Boltzmann distributions of uncomplexed states, and hence provide a set of additional conformations that are valid for

5 molecular design. Alternate side chain reorientations can also be examined by Dead End Elimination and A* algorithms (University of Southampton), by iterative systematic conformational searches of each side chain, or by comparison of each residue type to members of the Protein Data Bank that have the same backbone torsions. Valid conformations of the BC loop (or loops EF and BG) may be created by searching the Brookhaven Protein Data Bank for
10 loops that have similar anchoring geometries or by imposing random backbone conformations within the selected loops and filtering the results to fit the anchor residues. Both of these knowledge-based methods generate initial structures which can be subjected to force-field minimizations to produce feasible geometries.

15 In addition to the flexibility inherent to the peptide binding site, the interface between the two SH2 domains provides opportunities for exploring additional conformational states. The interface that is exclusive to the two SH2 domains provides a total buried surface area of only about 200 Å², and consists largely of hydrogen bonding contacts, many of which are mediated by water. Experiments with isoelectric focusing gels suggest that uncomplexed ZAP-NC exhibits
20 conformational mobility between the two SH2 domains that is subdued upon binding to the ζ₁ peptide. Since ZAP function requires that both SH2 domains associate simultaneously with a doubly-phosphorylated ITAM of the TCR, gross displacements between the two SH2 domains may play a regulatory role. Thus, conformations in which the SH2 domains are separated may represent an inactivated state, and inhibitors that stabilize this orientation become attractive.
25 Molecular dynamics simulations of a fully solvated ZAP-NC may provide insight into the structural manifestation of a possible dissociation between the SH2 domains, and an additional target conformation of the uncomplexed protein.

Receptor site mapping encompasses a variety of computational procedures that identify
30 energetically favorable binding sites on macromolecules. The most straightforward procedures involve "painting" a solvent-accessible surface (or an otherwise generated cast) of the macromolecular target according to empirically determined physical properties, such as electrostatic or lipophilic potential, degree of curvature, and hydrogen-bonding character. Such methods for thus characterizing the surface of a macromolecule are incorporated in programs
35 such as Grasp (Columbia University), DelPhi (Biosym Technologies), MOLCAD (Tripos, Inc.), and Hint (Virginia Commonwealth University). Subsequent molecule design involves identification or design of ligands that possess features complimentary to the identified surface characteristics. More advanced algorithms involve the actual calculation of interaction enthalpies between the target and potential ligands or fragments. In practice, the coordinates of

the protein or protein fragment of interest (which may be rotated or otherwise transformed) are stripped of any undesired ligand (or portion thereof) and/or of any undesired solvent molecules. The coordinates are then processed to attach molecular mechanics parameters to the atomic positions to provide a processed target for mapping. The target may be partitioned into discrete binding sites. The target or partitioned sites thereof are flooded with given functional group fragments that are subsequently allowed to relax into desired locations, as in the program MCSS (Molecular Simulations, Inc.), or are encased within a regular lattice of site points on which single fragment probes are positioned sequentially; examples of programs that exploit the site-lattice algorithm include Grin/Grid (Molecular Discovery, Ltd.), Ludi (Biosym Technologies), Leapfrog (Tripos, Inc.), and Legend (University of Tokyo). In both techniques, the enthalpic contribution to binding affinity is estimated with a molecular mechanics force-field, and appropriate positions of selected functional groups are determined systematically.

In the site-lattice approach, a box is defined enclosing a desired portion of the target within a defined lattice. The lattice resolution, i.e., the distance between lattice points, may be defined by the practitioner or may be set by the computer program. Likewise, other parameters of points within the lattice, such as hydrophobicity or other characteristics, may be similarly defined. Probes (i.e. computer models) of one or more selected moieties, functional groups, molecules or molecular fragments are positioned at lattice points and the interaction energy of the probe-target pair is determined for each such lattice point. The data for each selected moiety, functional group, etc. is collected and may be recovered as a data set, visualized on a computer monitor or printed out in various text or graphic formats.

As an alternative to positioning a moiety at each of a set of lattice points, one may, as previously mentioned, flood the target (defined by the coordinates as described above) with multiple copies of a selected fragment, moiety, molecule, etc. by superimposing the multiple copies into the vicinity of the protein target. The model is then subjected to group minimization (i.e., molecular mechanics minimization) calculations to identify points or areas of favorable interaction. Data may be handled as in the lattice approach.

One application of this method to the structure of ZAP-NC involves the crystal structure coordinates stripped of both the peptide ligand (ζ_1) and experimentally observed water molecules. The binding site so revealed comprises all protein residues that reside within van der Waals distance of any position previously occupied by the peptide. This "conventional" binding site is enlarged to include the bulk of the proximal protein surface, hence additional crevices and depressions not occupied by known ligands for any SH2 domains are considered as potential "auxiliary" binding regions, and their occupation could contribute significantly to the inhibition of ZAP association with the T cell receptor. Similar definition of the binding face of ZAP-NC applies to any alternate coordinates derived experimentally or via the modeling

procedures described above. Receptor site mapping, as well as other methods described herein, may be applied to the 3-D structure of a ZAP family member to design or select ligands capable of binding to an SH2 domain or other site within the ZAP-NC (or ZAP family-NC) structure.

- 5 Receptor site maps provide the seeds for ligand evolution via **Database searches**, which are described above, and for **Grow/link methods** for *de Novo* design of new chemical entities. Programs for ligand growth first access extensible fragment dictionaries in order to place appropriate functional groups at site points. A genetic algorithm or a subgraph isomorphism protocol is then invoked to connect the fragments with small aliphatic chains or rings.
- 10 Stochastic enhancements may be introduced by modification of internal degrees of freedom as well as translation and rotation of the candidate model within the binding cavity. The resulting sets of molecules are scored and filtered by functions that consider the steric constraints of the binding site, the complementarity of electrostatic and hydrophobic interactions, and a solvation estimate. Programs of this type that could be applied for the design of new ligands for ZAP-NC
- 15 include Ludi (Biosym Technologies), Leapfrog (Tripos, Inc.), Legend (University of Tokyo), Grow (Upjohn), Builder/Delegate (University of California, San Francisco), and Sprout (University of Leeds). Clique detection methods provide an alternative strategy to site mapping and ligand growth. DOCK (University of California, San Francisco) and similar programs fill a given binding site with the smallest set of atom-sized spheres possible; a database search then
- 20 attempts to orient ligands such that the atoms superimpose onto the centers (or "nuclei") of the site-filling spheres. The shape complementarity is augmented by scoring functions that include the steric requirements of the cavity and a potential energy function.

- Optimization of ligands** (from any source) may be enhanced using the three dimensional
- 25 structural of ZAP-NC. Use of receptor site maps or hydropathic profiles of ZAP-NC may be used to identify preferred positions for functional group components of ligands, and can be used to filter or constrain conformational searches of ligand structures which would otherwise typically be controlled by minimal steric considerations of the ligand structures themselves. The availability of an explicit binding site also permits one to determine the mode of ligand
- 30 binding to the target protein via methods that utilize force-fields directly in simulated annealing, distance geometry, Metropolis Monte Carlo, or stochastic searches for binding modes. Examples of programs that can be applied to rationalize ligand binding to ZAP-NC include Autodock (Scripps Clinic), DGEOM (QCPE #590), Sculpt (Interactive Simulations, Inc.), or any of the molecular dynamics programs described above. Once a tractable set of possible
- 35 binding orientations is obtained, one can readily identify the appropriate mode of binding through modifications in test ligands designed to alter in a predictable fashion the binding affinity of each model under consideration. For instance, a ligand may be modified to contain a functional group at a position which is inconsistent with one binding model, yet consistent with another model. Binding data can then be used to weed out "disproven" models. Once iterative

weeding of unlikely binding modes generates an appropriate model, possibilities for improvement of the lead become readily apparent from the local protein environment.

5 An alternative protocol for ligand optimization involves 3D database searching in conjunction with knowledge of the binding site. Modeling can reveal multiple candidates for the bioactive conformation of a given ligand. A probe for the correct conformation can include a 3D search to identify several constrained mimics of each possible conformer. Structure-activity relationships of the unconstrained ligand would suggest which functional groups should be retained in the constrained mimics. Finally, the steric and electrostatic requirements of the
10 binding site could constitute a filter for prioritizing the resultant possibilities.

The structure of ZAP-NC permits accurate **model-building** of homologous proteins, and their subsequent use in drug design. The SH2 domains and inter-domain coiled coil regions of the protein tyrosine kinase p72^{Syk} share a high degree of sequence similarity with ZAP-70. The
15 ZAP-NC structure may be readily used in the development of a reliable model of Syk-NC by either knowledge-based template building methods, or by iterations of directed point mutations followed by local molecular mechanics minimizations. Examples of programs that can be applied in the development of a model of Syk-NC include Composer (Birbeck College), Modeler (MSI), and Homology (Biosym Technologies). The resultant model can then be subjected to any of the
20 CADD techniques described above.

F. Characterization of Compounds

Compounds designed, selected and/or optimized by methods described above may be evaluated for
25 binding activity with respect to proteins containing one or more SH2 domains of interest using various approaches, a number of which are well known in the art. For instance, compounds may be evaluated for activity as competitive inhibitors of the binding of an SH2 domain with a phosphorylated ligand thereto. See e.g. Pawson, US Patent No. 5,352,660 (4 October 1994). Surface plasmon resonance (SPR) technology may be used for evaluating the binding properties
30 of compounds with respect to one or more SH2 domains of interest (see e.g., Panayotou et al, 1993, Molecular and Cellular Biology 13: 3567-3576), as can fluorescence proximity methods, and other methods known in the art.

SPR methodologies measure the interaction between two or more macromolecules in real-time
35 through the generation of a quantum-mechanical surface plasmon. The SPR methodology as exploited by the BIAcore Biosensor[®] (Pharmacia Biosensor, Piscataway, NJ) focuses a beam of polychromatic light at the interface between a gold film (provided as a disposable biosensor "chip") and a buffer compartment that can be regulated by the user. Attached to the gold film is a 100 nm thick "hydrogel" composed of carboxylated dextran which provides a matrix for the

covalent immobilization of analytes of interest. When the focused light interacts with the free electron cloud of the gold film, plasmon resonance is enhanced. The resulting reflected light is spectrally depleted in wavelengths that optimally evolved the resonance. By separating the reflected polychromatic light into its component wavelengths (by means of a prism), and
5 determining the frequencies which are depleted, the BIAcore establishes an optical interface which accurately reports the behavior of the generated surface plasmon resonance. When designed as above, the plasmon resonance—and thus the depletion spectrum—is exquisitely sensitive to mass in the evanescent field (which corresponds roughly to the thickness of the hydrogel). If one component of an interacting pair is immobilized to the hydrogel, and the
10 interacting partner is provided through the buffer compartment, the interaction between the two components can be measured in real time based on the accumulation of mass in the evanescent field and its corresponding effects of the plasmon resonance as measured by the depletion spectrum. This system permits rapid and extremely sensitive real-time measurement of the molecular interactions without the need to label either component.

15 Fluorescence polarization (FP) is a measurement technique that can readily be applied to protein-protein and protein-ligand interactions in order to derive IC50s and K_ds of the association reaction between two molecules. In this technique one of the molecules of interest must be conjugated with a fluorophore: this is generally the smaller molecule in the system (in
20 the case of a SH2 system, a phospho-tyrosine-containing peptide). The sample mixture, containing both the ligand-probe conjugate and the protein receptor, is excited with vertically polarized light. Light is absorbed by the probe fluorophores, and re-emitted a short time later. The degree of polarization of the emitted light is measured. Polarization of the emitted light is dependent on several factors, but most importantly on viscosity of the solution and on the
25 apparent molecular weight of the fluorophore.

With proper controls, changes in the degree of polarization of the emitted light depends only on changes in the apparent molecular weight of the fluorophore, which in-turn depends on whether the probe-ligand conjugate is free in solution, or is bound to a protein receptor. Binding assays
30 based on FP have a number of important advantages. Key among these are the measurement of IC50s and K_ds under true homogenous equilibrium conditions, speed of analysis and amenity to automation, and ability to screen in cloudy suspensions and colored solutions.

Automation of such an FP-based assay is achieved using a 96-well fluorescence polarization
35 plate reader. This reader can read polarization values at a sensitivity level of 1nM for fluorescein-labeled molecules, and can read an individual plate in 3 minutes.

Fluorescence polarization equilibrium binding assays have been adapted for ZAP, Syk, and Src domains. A binding curve of a doubly-phosphorylated ζ -1 sequence to N,C-ZAP, with associated Scatchard plot of the data is shown in FIG. 5.

- 5 It will often be preferred that a compound preferentially inhibits the interaction of a particular SH2-containing protein with its natural ligand (or a portion thereof or analog based thereon), e.g. at least an order of magnitude, and even more preferably, at least two orders of magnitude better (by any measure) than it inhibits some other SH2-ligand interaction.
- 10 Such compounds may be further evaluated for activity in inhibiting cellular or other biological events mediated by a pathway involving the interaction of interest using a suitable cell-based assay or an animal model. Cell-based assays and animal models suitable for evaluating inhibitory activity of a compound with respect to a wide variety of cellular and other biological events are known in the art. New assays and models are regularly developed and reported in the
- 15 scientific literature.

- For example, compounds which bind to ZAP-70 may be evaluated for biological activity in inhibiting T cell activation using any conventional assay methods and materials. Thus, compounds which bind to ZAP may be assayed for inhibition of CD4+ and CD8+ T-lymphocytes
- 20 in vitro and for lack of in vitro toxicity on cytotoxic T-cells within the dose range used to demonstrate in vitro activity. A battery of *in vivo* models may be used to profile the breadth of the compound's immunosuppressive activity and compare the profile to those of positive controls such as cyclosporin and FK506. Comparisons may also be made to other currently accepted immunosuppressive compounds, i.e. rapamycin, cyclophosphamide, and leflunomide.
- 25 Initial *in vivo* screening models include: Delayed type hypersensitivity testing, Allogeneic skin transplantation, and Popliteal lymph node hyperplasia. Compounds demonstrating optimal profiles in the above models are advanced into more sophisticated models designed to confirm immunosuppressive activity in specific therapeutic areas including: Rheumatoid arthritis, Transplantation, Graft vs. host disease, and Asthma.

- 30 Compounds which bind to SYK may be evaluated for inhibitory activity in a mast cell or basophil degranulation assay. The inhibitory activity of a compound of this invention with respect to cellular release of specific mediators such as histamine, leukotrienes, hormonal mediators and/or cytokines as well as its biological activity with respect to the levels of
- 35 phosphatidylinositol hydrolysis or tyrosine phosphorylation can be characterized with conventional *in vitro* assays as an indication of biological activity. (See e.g. "IgE-induced histamine release from rat basophilic leukemia cell lines: isolation of releasing and nonreleasing clones". Edward L. Barsumian, Chaviva Isersky, Marianne G. Petrino and Reuben P. Siraganian. Eur. J. Immunol. 1981. 11:317-323; Forrest, MJ, 1991, Biochemical

Pharmacology 42:1221-1228 (measuring N-acetyl- β glucosaminidase from activated neutrophils); and Stephan, V.M., et al., J. Biol. Chem. 267:5434-5441 (1992)). For example, histamine release can be measured by a radioimmunoassay using a kit available from AMAC Inc. (Westbrook, ME). One can thus evaluate the biological activity of compounds which bind to SYK
5 and compare them to one another and to known active compounds such as leflunomide (and its active metabolite, A771726), vanadate, staurosporine, genistein, or other compounds, including clinically relevant compounds, which can be used as positive controls.

Generally speaking, in such assays IC₅₀ scores of 150-300 μ M are considered of interest,
10 scores of 50-150 μ M are considered good, and scores below about 50 μ M are of high interest.

Compounds which bind to SYK may also be tested in an *ex vivo* assay for their ability to block antigen-stimulated contraction of sensitized guinea pig tracheal strip tissue. Activity in this assay has been shown to be useful in predicting the efficacy of potential anti-asthma drugs.
15 Numerous animal models of asthma have been developed and can be used (for reviews, see Larson, "Experimental Models of Reversible Airway Obstruction", in THE LUNG, Scientific Foundations, Crystal, West et al. (eds.), Raven Press, New York, pp. 953-965 (1991); Warner et al., 1990, Am. Rev. Respir. Dis. 141:253-257). Species used in animal models of asthma include mice, rats, guinea pigs, rabbits, dogs, sheep and primates. Other *in vivo* models
20 available are described in Cross et al., Lab. Invest. 63:162-170 (1990)); and Koh, et al., Science, 256:1210-1213 (1992)).

By way of further illustration, compounds which bind to an SH2-bearing protein involved in the transduction of a signal involved in the initiation, maintenance or spread of cancerous
25 growth may be evaluated in relevant conventional *in vitro* and *in vivo* assays. See e.g., Ishii et al., J. Antibiot. XLII:1877-1878 (1989) (*in vitro* evaluation of cytotoxic/antitumor activity); Sun et al., US Patent 5,206,249 (issued 27 April 1993)(*in vitro* evaluation of growth inhibitory activity on cultured leukemia cells); and Sun et al., *supra* (xenograft models using various human tumor cell lines xenografted into mice, as well as various transgenic
30 animal models).

Single and multiple (e.g., 5 to 7 days) dose investigative toxicology studies are typically performed in the efficacy test species using the intended route of administration for the efficacy study. These investigative toxicology studies are performed to identify maximum tolerated dose,
35 subjective bioavailability from the intraperitoneal or oral routes of administration, and estimation of an initial safety margin. Initial bioavailability and pharmacokinetics (blood clearance) of the compounds may be determined, with standard cold or radioactive assay methods, to assist in defining appropriate dosing regimens for the compounds in the animal models.

Illustration of drug design

To illustrate one approach to using the structure of a ZAP family member in drug design, we used the structural coordinates of the ZAP-NC: ζ 1 complex (see e.g. Appendix I) to characterize amino acid residues of interest with respect to their capability for interaction with ligand molecules. For instance, using the program Sybyl we identified amino acid residues from the N-terminal SH2 domain and C-terminal SH2 domains which are within 10 angstroms of the ζ -1 peptide ligand and which reside on the protein surface. Residues from that region which are capable of entering hydrophobic interactions with moieties on ligand molecules are listed in Table A. Acidic residues from that region which are capable of entering hydrogen-bonding interactions or ionic (salt-bridge) interactions with moieties on ligand molecules are listed in Table B. Basic residues from that region which are capable of entering hydrogen-bonding interactions or ionic (salt-bridge) interactions with moieties on ligand molecules are listed in Table C. Neutral residues from that region which are capable of entering hydrogen-bonding interactions with moieties on ligand molecules are listed in Table D. Residues from that region having appropriately disposed backbone amide carbonyls which are capable of entering hydrogen-bond accepting interactions with moieties on ligand molecules are listed in Table E. Residues from that region having appropriately disposed backbone amide nitrogens which are capable of entering hydrogen-bond donating interactions with moieties on ligand molecules are listed in Table F.

<u>Table A</u>	<u>Table B</u>	<u>Table C</u>	<u>Table D</u>	<u>Table E</u>	<u>Table F</u>
ALA18	GLU19	ARG17	SER14	PHE56	ARG17
LEU40	GLU21	ARG37	SER16	HIS58	LEU40
VAL47	GLU62	ARG41	GLN38	ALA72	HIS58
LEU48	ASP90	HIS52	CYS39	GLY73	CYS96
LEU50	ASP92	ARG55	SER42	ASP92	ARG170
PHE56	GLU171	HIS57	TYR87	GLY93	LYS193
PHE59	GLU172	HIS58	THR169	LEU168	GLU194
PRO60	GLU174	LYS75	TYR178	PRO191	HIS210
ILE61	GLU194	ARG170	SER201	TYR198	LEU212
ILE71	GLU225	ARG190	TYR204	VAL208	GLU225
ALA72	GLU237	ARG192	THR207	HIS210	LYS228
PHE86	ASP244	LYS193	TYR209	PRO224	LEU241
TYR87		HIS210	TYR211	GLU225	ALA243
PRO91		LYS228	SER214	GLY226	GLY245
LEU94		LYS242	CYS222	LYS228	ILE247
PRO95		LYS251	THR227	ASP244	CYS249
TYR178			TYR238	GLY245	
LYS193			CYS249	LEU246	
ALA199					
LEU200					
TYR204					
VAL208					
TYR209					
TYR211					
LEU212					
LEU223					
PRO224					

LYS228
 PHE229
 LEU235
 TYR238
 LEU239
 LEU241
 LYS242
 ALA243
 LEU246
 ILE247
 TYR248
 LEU250

Similarly, we have identified amino acid residues from the C-terminal domain and the N-terminal domain which reside at the interface between these two domains which would be capable of interacting with ligand molecules in such a manner as to disrupt the juxtapositioning of domains necessary for binding ZAP-70 to the phosphorylated T-cell receptor. Residues from that region which are capable of entering hydrophobic interactions with moieties on ligand molecules are listed in Table G. Acidic residues from that region which are capable of entering hydrogen-bonding interactions or ionic (salt-bridge) interactions with moieties on ligand molecules are listed in Table H. Basic residues from that region which are capable of entering hydrogen-bonding interactions or ionic (salt-bridge) interactions with moieties on ligand molecules are listed in Table I. Neutral residues from that region which are capable of entering hydrogen-bonding interactions with moieties on ligand molecules are listed in Table J.

<u>Table G</u>	<u>Table H</u>	<u>Table I</u>	<u>Table J</u>
ILE15	GLU62	LYS220	SER14
LEU40	ASP230	LYS242	SER15
LEU43	GLU237		GLN38
MET161	GLU244		SER42
LYS220			THR231
PHE229			GLN234
TRP233			TYR238
TYR238			
LEU241			
LYS242			

Similarly, we have identified amino acid residues from the interdomain (also called spacer A) region which reside at the interface between the two α -helical coils of this region and which would be capable of interacting with ligand molecules in such a manner as to disrupt the observed folding of the NC-ZAP domain. Residues from that region which are capable of entering hydrophobic interactions with moieties on ligand molecules are listed in Table K. Acidic residues from that region which are capable of entering hydrogen-bonding interactions or ionic (salt-bridge) interactions with moieties on ligand molecules are listed in Table L. Basic residues from that region which are capable of entering hydrogen-bonding interactions or ionic (salt-bridge) interactions with moieties on ligand molecules are listed in Table M.

Neutral residues from that region which are capable of entering hydrogen-bonding interactions with moieties on ligand molecules are listed in Table N.

<u>Table K</u>	<u>Table L</u>	<u>Table M</u>	<u>Table N</u>
ILE142	GLU134	ARG119	GLN145
ILE153	GLU150	ARG124	THR156
LEU133		ARG160	TYR126
LEU138			
LEU152			
MET122			
PHE115			
TRP131			
TYR126			
VAL114			
VAL123			
VAL127			
VAL149			

- 5 The amino acid residues listed in Tables A-N can be used to define binding sites on the ZAP-70 protein for moieties on ligand molecules. A binding site comprises any subset of the foregoing residues which are within about 10 angstroms of one another. For example, the residues CYS39, ARG41, SER42, PRO60, GLU62, LYS220, and ASP230 comprise such a binding site.
- 10 We contemplate a new class of ligands for ZAP family members based on the foregoing type of evaluation. Specifically, this class comprises compounds containing one or more moieties which are each capable of interacting with one or more of the foregoing residues, preferably with one or more binding sites defined by the foregoing residues. A subset of such compounds are those which contain at least two moieties, of which at least one is a substituted or unsubstituted
- 15 phosphate or phosphate mimic (e.g., a substituted or unsubstituted phosphonate moiety). In embodiments in which those moieties are substituted, the substituent may be alkyl, aryl, or arylalkyl.

20 The term alkyl is intended to include both saturated and unsaturated straight chain, branched, cyclic, or polycyclic aliphatic hydrocarbons which may contain oxygen, sulfur, or nitrogen in place of one or more carbon atoms, and which are optionally substituted with one or more functional groups selected from the group consisting of hydroxy, C₁-C₈ alkoxy, acyloxy, carbamoyl, amino, N-acylamino, ketone, halogen, cyano, carboxyl, and aryl. Alkyl groups are preferably lower alkyl, i.e. containing 1 to 8 carbon atoms.

25 The term aryl is intended to include stable cyclic, heterocyclic, polycyclic, and polyheterocyclic unsaturated C₃-C₁₄ moieties, exemplified but not limited to phenyl, biphenyl, naphthyl, pyridyl, furyl, thiophenyl, imidazolyl, pyrimidinyl, and oxazolyl; which may further be substituted with one to five members selected from the group consisting of

30 hydroxy, C₁-C₈ alkoxy, C₁-C₈ branched or straight-chain alkyl, acyloxy, carbamoyl, amino,

N-acylamino, nitro, halogen, trifluoromethyl, cyano, and carboxyl (see e.g. Katritzky, Handbook of Heterocyclic Chemistry).

The ligands may contain one or more amide bonds, but are preferably non-peptidic. Preferably the molecular weight of the ligands is under 1200, more preferably under 750, more preferably under 500. Peptides and peptidic molecules comprise two or more naturally occurring α -amino acids linked by peptide bonds (primary amide bonds, except where the amino acid is proline).

- 10 The ability of a ligand or a moiety on a ligand to interact with a particular residue or set of residues in a binding site may be determined by noting the proximity of a ligand moiety to a residue of interest. Proximity may be determined by physical methods such as x-ray crystallography or NMR evaluation of a co-complex of the protein and ligand, or may be determined through modeling studies in which the structure of the ligand is docked with the structure of the protein using programs such as described above. A number of commercially available programs are capable of conveniently evaluating a modeled or experimentally determined structure and identifying atoms involved in hydrogen-bonding or hydrophobic interactions. Generally, hydrogen bonding (which includes salt bridge and other ionic interactions) occurs across distances of about 2.8 - 3.5 angstroms, more usually up to about 3.2 angstroms, and through donor-H-acceptor angles of about $180^\circ \pm 60^\circ$. Hydrophobic interactions occur across distances of up to about 5 angstroms, more preferably up to about 4.5 angstroms and more frequently up to about 4 angstroms, depending on the nature of the atoms involved. Again, any of a number of commercially available computer programs may be used to identify hydrogen bonding and hydrophobic interactions between ligand moieties and protein atoms.

G. Pharmaceutical Compositions and Uses of Inhibitors of ZAP family members

- 30 Compounds which bind to one or more ZAP family members may be used as biological reagents in binding assays as described herein for functional classification of an SH2-bearing protein, particularly a newly discovered protein, based on ligand specificity.

- Moreover, compounds identified as described above can be used to inhibit the occurrence of biological events resulting from molecular interactions mediated by a ZAP family protein containing one or more SH2 domains. This invention thus provides a method and materials for inhibiting (totally or partially) the interaction between such a protein and a natural ligand thereto (i.e., a naturally occurring protein (typically), or a portion or analog thereof, which binds in a cell to the ZAP family protein) or a biological activity mediated by such interaction.

In this method, a compound identified or obtained as described herein is combined or contacted with the ZAP family protein, such as by introducing the compound into a cell in which the molecular interaction is to be inhibited. Following introduction of the compound, the interaction of the ZAP family protein and its natural ligand is inhibited as may be readily detected.

- 5 Inhibiting such interactions can be useful in research aimed at better understanding the biology of SH2-mediated events.

- In general, inhibitors of SH2-mediated interactions would be useful, for example, in the diagnosis, prevention or treatment of conditions or diseases resulting from a cellular processes mediated by the interaction of SH2 bearing protein with a natural ligand therefor. For example, a patient can be treated to prevent the occurrence or progression of osteoporosis or to reverse its course by administering to the patient in need thereof an SH2 binding or blocking agent which selectively binds Src SH2. There are many other conditions for which SH2 binding or blocking agents may be useful therapeutically, including breast cancer where the SH2 domain-containing proteins Src, PLC γ and Grb7 have been implicated. Other relevant conditions include prostate cancer, in which case targeting Grb2, PLC γ , and PI3K, all of which contain SH2 domains, may be useful in treatment or prevention of the disease. Inhibition of the interaction of Grb2 or Abl SH2 domains with Bcr-abl may be useful to treat chronic myelogenous leukemia (CML) or acute myelogenous leukemia (AML). Still other relevant applications of an SH2 inhibitor would be to prevent interferon-, growth factor-, or cytokine-mediated diseases (e.g. inflammatory diseases) by targeting the SH2 domains of STAT proteins.

- Of particular interest are agents that block the interaction of ZAP family members with their natural ligands. For instance, inhibitors of interactions involving ZAP-70, which is believed to be involved in activation of T-cells, would be useful as an immunosuppressant in the treatment and prevention of autoimmune diseases and to prevent rejection of skin and organ transplants. Inhibitors of interactions of SYK with natural ligands would be useful in the treatment and prevention of asthma and untoward allergic reactions.

- An inhibitor selected or identified in accordance with this invention can be formulated into a pharmaceutical composition containing a pharmaceutically acceptable carrier and/or other excipient(s) using conventional materials and means. Such a composition can be administered to an animal, either human or non-human, for therapy of a disease or condition resulting from cellular events involving a molecular interaction mediated by a ZAP family protein.
- Administration of such composition may be by any conventional route (parenteral, oral, inhalation, and the like) using appropriate formulations as are well known in this art. The inhibitor of this invention can be employed in admixture with conventional excipients, ie, pharmaceutically acceptable organic or inorganic carrier substances suitable for parenteral administration.

Pharmaceutical applications

By virtue of its capacity to inhibit protein-protein interactions required for cellular events of pharmacologic importance, a compound identified as described herein may be used in

5 pharmaceutical compositions and methods for treatment or prevention of various diseases and disorders in a mammal in need thereof.

Mammals include rodents such as mice, rats and guinea pigs as well as dogs, cats, horses, cattle, sheep, non-human primates and humans.

10

The preferred method of such treatment or prevention is by administering to a mammal an effective amount of the compound to prevent, alleviate or cure said disease or disorder. Such effective amounts can be readily determined by evaluating the compounds of this invention in conventional assays well-known in the art, including assays described herein.

15

Therapeutic/Prophylactic Administration & Pharmaceutical Compositions

The invention provides methods of treating, preventing and/or alleviating the symptoms and/or severity of a disease or disorder referred to above by administration to a subject of a in an amount effective therefor. The subject will be an animal, including but not limited to animals
20 such as cows, pigs, chickens, etc., and is preferably a mammal, and most preferably human.

Various delivery systems are known and can be used to administer the inhibitor, e.g., encapsulation in liposomes, microparticles, microcapsules, etc. One mode of delivery of interest is via pulmonary administration, as detailed more fully *infra*. Other methods of
25 introduction include but are not limited to intradermal, intramuscular, intraperitoneal, intravenous, subcutaneous, intranasal, epidural and oral routes. The inhibitor may be administered by any convenient route, for example by infusion or bolus injection, by absorption through epithelial or mucocutaneous linings (e.g., oral mucosa, rectal and intestinal mucosa, etc.) and may be administered together with other biologically active agents.

30 Administration can be systemic or local. For treatment or prophylaxis of nasal, bronchial or pulmonary conditions, preferred routes of administration are oral, nasal or via a bronchial aerosol or nebulizer.

In specific embodiments, it may thus be desirable to administer the inhibitor locally to the area
35 in need of treatment; this may be achieved by, for example, and not by way of limitation, local infusion during surgery, topical application, by injection, by means of a catheter, by means of a suppository, or by means of a skin patch or implant, said implant being of a porous, non-porous, or gelatinous material, including membranes, such as sialastic membranes, or fibers.

This invention also provides pharmaceutical compositions. Such compositions comprise a therapeutically (or prophylactically) effective amount of the inhibitor, and a pharmaceutically acceptable carrier or excipient. Such a carrier includes but is not limited to saline, buffered saline, dextrose, water, glycerol, ethanol, and combinations thereof. The carrier and
5 composition can be sterile. The formulation should suit the mode of administration.

The composition, if desired, can also contain minor amounts of wetting or emulsifying agents, or pH buffering agents. The composition can be a liquid solution, suspension, emulsion, tablet, pill, capsule, sustained release formulation, or powder. The composition can be formulated as a
10 suppository, with traditional binders and carriers such as triglycerides. Oral formulation can include standard carriers such as pharmaceutical grades of mannitol, lactose, starch, magnesium stearate, sodium saccharine, cellulose, magnesium carbonate, *etc.*

In a specific embodiment, the composition is formulated in accordance with routine procedures
15 as a pharmaceutical composition adapted for intravenous administration to human beings. Typically, compositions for intravenous administration are solutions in sterile isotonic aqueous buffer. Where necessary, the composition may also include a solubilizing agent and a local anesthetic to ease pain at the side of the injection. Generally, the ingredients are supplied either separately or mixed together in unit dosage form, for example, as a lyophilized powder or water
20 free concentrate in a hermetically sealed container such as an ampoule or sachette indicating the quantity of active agent. Where the composition is to be administered by infusion, it can be dispensed with an infusion bottle containing sterile pharmaceutical grade water or saline. Where the composition is administered by injection, an ampoule of sterile water for injection or saline can be provided so that the ingredients may be mixed prior to administration.

25 Administration to an individual of an effective amount of the inhibitor can also be accomplished topically by administering the compound(s) directly to the affected area of the skin of the individual. For this purpose, the inhibitor is administered or applied in a composition including a pharmacologically acceptable topical carrier, such as a gel, an ointment, a lotion, or a cream,
30 which includes, without limitation, such carriers as water, glycerol, alcohol, propylene glycol, fatty alcohols, triglycerides, fatty acid esters, or mineral oils.

Other topical carriers include liquid petroleum, isopropyl palmitate, polyethylene glycol, ethanol (95%), polyoxyethylene monolaurate (5%) in water, or sodium lauryl sulfate (5%)
35 in water. Other materials such as anti-oxidants, humectants, viscosity stabilizers, and similar agents may be added as necessary.

In addition, in certain instances, it is expected that the inhibitor may be disposed within devices placed upon, in, or under the skin. Such devices include patches, implants, and injections which release the compound into the skin, by either passive or active release mechanisms.

- 5 Materials and methods for producing the various formulations are well known in the art [see *e.g.* US Patent Nos. 5,182,293 and 4,837,311 (tablets, capsules and other oral formulations as well as intravenous formulations)].

- The effective dose of the inhibitor will typically be in the range of about 0.01 to about 50
10 mg/kgs, preferably about 0.1 to about 10 mg/kg of mammalian body weight, administered in single or multiple doses. Generally, the inhibitor may be administered to patients in need of such treatment in a daily dose range of about 1 to about 2000 mg per patient.

- The amount of the inhibitor which will be effective in the treatment or prevention of a
15 particular disorder or condition will depend on the nature of the disorder or condition, and can be determined by standard clinical techniques. In addition, *in vitro* or *in vivo* assays may optionally be employed to help identify optimal dosage ranges. Effective doses may be extrapolated from dose-response curves derived from *in vitro* or animal model test systems. The precise dosage level of the inhibitor, as the active component(s), should be determined as in
20 the case of all pharmaceutical treatments, by the attending physician or other health care provider and will depend upon well known factors, including route of administration, and the age, body weight, sex and general health of the individual; the nature, severity and clinical stage of the disease; and the use (or not) of concomitant therapies.
- 25 The invention also provides a pharmaceutical pack or kit comprising one or more containers filled with one or more of the ingredients of the pharmaceutical compositions of the invention. Optionally associated with such container(s) can be a notice in the form prescribed by a governmental agency regulating the manufacture, use or sale of pharmaceutical or biological products, which notice reflects approval by the agency of manufacture, use or sale for human
30 administration.

Pulmonary Administration

- In one embodiment of this invention, the inhibitor is administered by pulmonary administration, *e.g.* via aerosolization. This route of administration may be particularly useful
35 for treatment or prophylaxis of bronchial or pulmonary infection or tumors.

Pulmonary administration can be accomplished, for example, using any of various delivery devices known in the art (see *e.g.*, Newman, S.P., 1984, in *Aerosols and the Lung*, Clarke and Davia (eds.), Butterworths, London, England, pp. 197-224; PCT Publication No. WO

92/16192 dated October 1, 1992; PCT Publication No. WO 91/08760 dated June 27, 1991; NTIS Patent Application 7-504-047 filed April 3, 1990 by Roosdorp and Crystal), including but not limited to nebulizers, metered dose inhalers, and powder inhalers. Various delivery devices are commercially available and can be employed, e.g., Ultravent nebulizer

5 (Mallinckrodt, Inc., St. Louis, Missouri); Acorn II nebulizer (Marquest Medical Products, Englewood, Colorado), Ventolin metered dose inhaler (Glaxo Inc., Research Triangle Park, North Carolina); Spinhaler powder inhaler (Fisons Corp., Bedford, Massachusetts) or Turbohaler (Astra). Such devices typically entail the use of formulations suitable for dispensing from such a device, in which a propellant material may be present.

10

Ultrasonic nebulizers tend to be more efficient than jet nebulizers in producing an aerosol of respirable size from a liquid (Smith and Spino, "Pharmacokinetics of Drugs in Cystic Fibrosis," Consensus Conference, Clinical Outcomes for Evaluation of New CF Therapies, Rockville, Maryland, December 10-11, 1992, Cystic Fibrosis Foundation).

15

A nebulizer may be used to produce aerosol particles, or any of various physiologically acceptable inert gases may be used as an aerosolizing agent. Other components such as physiologically acceptable surfactants (e.g., glycerides), excipients (e.g., lactose), carriers, and diluents may also be included.

20

This invention is not to be limited in scope by the specific embodiments described herein. Indeed, various modifications of the invention in addition to those described herein will become apparent to those skilled in the art from the foregoing description. Such modifications are intended to fall within the the scope of the appended claims.

25

Various patents, patent applications and publications are cited herein, the disclosures of which are incorporated by reference in their entireties.

Experimental Examples

30

I. Protein Preparation

A. ZAP-NC: Expression, Purification and Complex Formation

Cloning

The ZAP-NC was expressed as a glutathione-S-transferase (GST) fusion protein. The DNA sequence encoding residues 1-259 from human ZAP 70 (A.C. Chan, M. Iwashima, C.W. Turck, A. Weiss *Cell* 71 649-662 (1992)) was cloned into the pGex expression vector (D.B. Smith, K.S. Johnson *Gene* 67, 31-40 (1988)) and transformed into *E. coli* BL21 or *E. Coli* B834. The

resulting construct coded for a thrombin cleavage site and two extra residues (G and S) at the N-terminus of the ZAP-NC.

Expression

- 5 In a typical preparation the ZAP-NC was produced by the growth and induction of two liters of culture (BL21) in BHI medium. The culture was grown at 25°C to an OD 595nm of 0.8 and induced with 1mM IPTG for 5 hours.

- The selenomethionyl (SeMet) ZAP-NC was produced using the auxotrophic strain of *E. coli* 834 (D.J. Leahy, H.P. Erickson, I. Aukhil, P. Joshi, W. Hendrickson *Proteins* 19 48-54 (1994)) with the selenomethionine replacing the methionine in a defined media. The SeMet ZAP-NC was grown in 10 liters of defined media (J.O.Boles, W.H. Tolleson, J.C. Schmidt, R.B. Dunlap, J.D. Odom, *J. Biol. Chem.* 267, 22217-22223 (1992)) supplemented with 0.5% thiamine using 50mg/L of D,L selenomethionine. The culture was grown at 30°C to an OD 595nm of 0.8 and
15 induced for 10-15 hours.

Purification

- The GST fusion proteins were isolated using glutathione agarose and then cleaved with thrombin. ZAP-NC was separated from the GST by binding the tandem SH2 domain to a phosphotyrosine
20 agarose column and eluting with a salt gradient. Subsequently the ZAP-NC was further purified by hydrophobic interaction chromatography on a phenyl sepharose column. The protein was stored under argon with 500mM NaCl and 10mM dithiothreitol at 4°C. A typical purification is listed below. Both the ZAP-NC and the SeMet ZAP-NC were judged to be >95% pure by N-terminal analysis and SDS gel electrophoresis. Mass spectrometric analysis of the ZAP-NC and
25 SeMet ZAP-NC indicated >95% incorporation of the selenomethionine.

Complex preparation

- Complexes of the ZAP-NC plus the ζ 1 peptide (NQLpYNELNLGRREEpYDVLD) were prepared by adding a 2-fold excess of peptide to the protein and then running the sample on a gel filtration
30 column. The peptide was dissolved in 200ul of 100mM Tris, pH 8.0. and added to 6mg of protein. The sample was incubated at room temperature for ~30min, then filtered through a 0.2 micron filter. A Superdex 75 16/60 column was equilibrated in 20mM Tris containing 100mM NaCl and 5mM DTT, pH 8.0 and the sample was loaded and 3mL fractions were collected. The complex eluted at 65.6mL and peak fractions were pooled based on protein A(280).
35 Analysis of complexation was done on a homogenous 20% native gel.

A typical Zap-NC Purification**Cell Lysis:**

- 1) Lysed ~20g cells using French pressure cell in 40mL of Buffer A:
- 5 2) Diluted 1:1 with Buffer B
- 3) Centrifuged at ~30,000 xg for 30min & removed the supernatant.

Glutathione Column 2.6x10:

- 1) Loaded the supernatant onto a glutathione column equilibrated into Buffer B.
- 10 2) Washed with ~100mL Buffer B then Buffer C to baseline.
- 3) Eluted in Buffer D; 5mL fractions were collected and pooled.

Thrombin Cleavage:

- 1) Added 200mM NaCl to the pool, then added human thrombin at 1ug/mg protein
- 15 2) Incubated on nutator at room temp. Samples were taken & run on an SDS gel while continuing to incubate. Reaction was complete at 40min. (PMSF can be added to stop the reaction.)
- 3) Diluted the pool x5 when cleavage was complete with 20mM Tris pH 8/5mM DTT.

Phosphotyrosine Column: 26x7.5cm:

- 1) Loaded the pool onto the column equilibrated in Buffer E:
- 2) Washed & eluted using a 5 CV gradient to buffer F. 5mL fractions were collected.
- 3) Pooled peak.

Phenyl Sepharose Column 26x17.5cm:

- 1) Diluted the pool 1:1 with 3M (NH₄)₂SO₄
- 2) Equilibrated the column with Buffer G:
- 3) Loaded the protein, washed to baseline, then eluted in a 3 CV gradient to Buffer H:
Pooled peak fractions.
- 30 4) Added 500mM NaCl to peak pool and 5mM DTT. Stored at 4°C under argon.

Buffers Used:**Glutathione**

Buffer A
PBS/0.5% Triton
400mM NaCl
5mM DTT
1mM Pefabloc

Buffer B
PBS/0.5% Triton

Phosphotyrosine

Buffer E:
20mM Tris pH 7.6
50mM NaCl
5mM DTT

Buffer F:
20mM Tris pH 7.6
2M NaCl

Phenyl Sepharose

Buffer G:
20mM Tris pH 8
1.5M (NH₄)₂SO₄
5mM DTT

Buffer H:
20mM Tris pH 8
5mM DTT

5mM DTT

5mM DTT

Buffer C

PBS/

5mM DTT

Buffer D:

100mM Tris pH 8

100mM NaCl

20mM reduced glutathione

2mM DTT

B. Syk-NCCloning and Expression

- 5 The DNA sequence encoding residues 6-265 of human Syk was cloned into the pET expression vector and transformed into *E. coli* BL21(DE3) (Shiue, L., *et al. Molecular and Cellular Biology* 15, 272-281 (1995)) In a typical preparation Syk-NC was produced from the growth and induction of two liters of culture in BHI medium supplemented with 200ug/mL ampicillin. The culture was grown at 25°C to an OD at 595nm of 1-2, induced with 1mM IPTG, and harvested 4
10 hours later.

Purification

- All operations were performed in a cold room at 4°. The cells were lysed using a French pressure cell and 2X volumes of lysis buffer, 20mM Tris pH 8, 500mM NaCl, 5mM DTT, and
15 1mM pefabloc. The supernatant was collected by high speed centrifugation, diluted 2-fold with buffer A (20mM Tris pH 8, 5mM DTT) and applied to a 1.6x10 cm polyethylenimine anion exchange column equilibrated with the same buffer. The flow through was dialyzed overnight vs. buffer B (20mM Tris pH 7.4, 5mM DTT, 50mM NaCl) and then loaded onto a 50mL phosphotyrosine agarose column. The Syk-NC protein bound to the column and was eluted with a
20 salt gradient, 50mM to 2M NaCl in 4 CV. The Syk-NC protein was collected and dialyzed into buffer C: 50mM Mes pH 6.2, 5mM CaCl₂, 5mM DTT. After dialysis the protein sample was centrifuged at high speed and then applied to a Source 15S column (16x10cm) equilibrated in buffer C. The column was then washed with buffer C and eluted using a salt gradient, 0 to
25 750mM NaCl in 5 CVs. The peak fraction was pooled. SDS gel electrophoresis indicated that the protein was >95% pure. N-terminal sequencing and mass spec analysis confirmed the expected sequence. The protein concentration was determined by measuring the absorption at 280nm. The purified protein was stored at 4° with 10mM DTT.

Syk-NC and peptide complexes

- 30 Complexes have been made with a number of different γ and ζ peptides of different lengths. In a typical experiment, a two fold excess of peptide was dissolved in 100mM Tris buffer and added to 10mg of Syk-NC. The sample was incubated at RT for 30 minutes, and then run on a Superdex

75 column (16x60cm) equilibrated in 20mM Tris pH 8, 100mM NaCl, 10mM DTT. Three mL fractions were collected and the peak was pooled.

C. Syk-C Experimental

5

Cloning and expression

The C-terminal SH2 domain of human Syk encoding residues 163-265 was cloned into the pGEX2TK expression vector and transformed into E. coli BL21(DE3) (Shiue, L., *et al. Molecular and Cellular Biology* 15, 272-281 (1995); Law, C.L., *et al. J. Biol. Chem.* 269, 12310-12319 (1994)). Isotopically labeled glutathione-S-transferase (GST)-Syk-C was produced from the growth and induction of two liters of culture in M9 medium supplemented with 1g/L of $^{15}\text{NH}_4\text{Cl}$ and/or 3g/L of ^{13}C glucose to obtain uniformly labeled Syk-C SH2. The fractionally labeled (~10%) ^{13}C Syk-C sample was prepared by supplementing the M9 medium with 4.15g/L of a mixture containing a 9:1 ratio of unlabeled glucose: ^{13}C glucose just prior to induction. In a typical preparation the culture was grown at 25°C to an optical density (OD) at 595nm of 1.0, induced with 1mM isopropyl-b-D-thiogalactopyranoside (IPTG), and harvested 5 hours later. Cells were stored at -80°C until use.

15

Purification

The cells were lysed and the protein was affinity purified over glutathione agarose. The GST fusion protein was cleaved with thrombin, and further purified over phosphotyrosine agarose and ion exchange resin to yield an SH2 domain that was >98% pure by SDS gel electrophoresis. A typical purification is outlined below. N-terminal sequencing and mass spectroscopic analysis have confirmed the expected sequence. The purified protein was stored under argon with an excess of dithiothreitol (DTT).

25

Complex Preparation

Syk-C SH2 protein: pTyr76 peptide complex samples were prepared by adding a two fold molar excess of the pTyr76 peptide dissolved in 0.5mL NMR buffer (50mM Tris- d_11 , 0.15N NaCl, 10mM DTT- d_8 , 0.025% NaN_3 , pH=7.0) to the Syk-C protein dissolved in the same buffer. This mixture was incubated overnight at 8°C then concentrated and further equilibrated using Centricon10 microconcentrators at 14°C. Five exchanges of buffer, 2mL to 200mL, ensured complete equilibration. Aliquots of the filtrate and the final complex solution were taken and analyzed by HPLC. All NMR samples contained 2-4mM protein.

35

A typical Syk-C purificationCell Lysis:

- 1) About 7g frozen pelleted cells were thawed in two volumes of PBS, 0.5% Triton X-100, 500mM NaCl, 5mM DTT, 2mM EDTA, 1mM PMSF.
- 2) The resulting homogenate was lysed using a 20K Manual-Fill FRENCH Pressure Cell at 16,000 psi for two passes.
- 3) Lysed cells were again diluted with two volumes fresh lysis buffer, stirred for 10 minutes, then centrifuged for 40 minutes at 30,600 x g to sediment cell debris.
- 4) Supernatant was filtered through 0.8µm Supor membrane filters prior to column loading. All actions carried out at 4°C.

Glutathione Agarose Chromatography:

- 1) 26 x 100mm Glutathione Agarose column was equilibrated with PBS, 2mM DTT.
- 2) Filtered bacterial lysate was loaded at 2 ml/minute, then column was washed with PBS, 0.5% Triton X-100, 500mM NaCl, 2mM DTT, followed by PBS, 2mM DTT.
- 3) GST fusion protein was eluted with 100mM Tris, 100mM NaCl, 20mM Reduced Glutathione, 2mM DTT, pH 8.0.

Enzymatic Cleavage of GST Fusion Protein:

- 1) 1 unit of human thrombin was added per mg of total protein in the Glutathione Agarose eluate.
- 2) The thrombin was allowed to react for ~16 hours at 4°C with slow magnetic stirring.
- 3) Completion of cleavage was verified by 20% SDS gel, then the reaction was stopped with 1mM PMSF.
- 4) Cleaved fusion protein was filtered through 0.2µm Supor membrane prior to loading on Phosphotyrosine Agarose column.

Phosphotyrosine Agarose Chromatography:

- 1) 26 x 100mm Phosphotyrosine Agarose column was equilibrated with Buffer A (20mM Tris, 100mM NaCl, 5mM DTT, pH 7.4.)
- 2) Cleaved fusion protein was loaded at 2 ml/minute then washed back to baseline with Buffer A.
- 3) Syk-C was eluted with a 0-100% B gradient in 4 column volumes. Buffer B = A + 1.9M additional NaCl.

PEI Chromatography:

- 1) 16 x 53mm polyethyleneimine column was equilibrated with Phosphotyrosine Buffer A.

- 2) Pooled Phosphotyrosine peak was loaded over PEI at 5 ml/minute then washed with Buffer A. Syk-C was in the flowthrough.

D. ZAP-C Experimental

Cloning and expression

The C-terminal SH2 domain of human ZAP 70 was produced as a glutathione-S-transferase (GST) fusion protein. Residues 155-258 of ZAP 70 were cloned into a pGEX expression vector and transformed into E. coli BL21. In a typical fermentation ZAP-C was produced from the growth and induction of four liters of culture in LB media supplemented with 200mg/mL ampicillin. The culture was grown at 37°C to an OD at 595nm of 1, induced with 1mM IPTG and harvested four hours later. Just prior to induction the temperature was dropped to 25°C. ¹⁵N-labeled ZAP-C was produced from the growth and induction of culture in M9 medium supplemented with 1g/L of ¹⁵NH₄Cl. Cells were stored at -80°C.

Purification

The ZAP-C cells were lysed and the protein was affinity purified over glutathione agarose. The GST fusion protein was cleaved with thrombin, and further purified over phosphotyrosine agarose to yield an SH2 domain that was >95% pure by sodium dodecyl sulfate (SDS) gel electrophoresis. N-terminal sequencing confirmed the expected sequence. The purified protein was stored under argon with an excess of dithiothreitol (DTT).

A typical ZAP-C purification

Cell Lysis:

- 1) 50g of frozen ZAP-C cells were thawed in two volumes of PBS, 0.5% Triton, 500mM NaCl, 5mM DTT, 2mM EDTA, 1mM PMSF.
- 2) The resulting homogenate was lysed using a Minnie Rannie cell disruptor at 16,000 psi for three passes.
- 3) The cell lysate was centrifuged for 40 minutes at 30,000 x g.
- 4) The supernatant was collected and filtered through a 0.8mm membrane prior to column loading. All actions were carried out at 4°C.

Glutathione Agarose Chromatography:

- 1) A 26 x 100mm glutathione agarose column was equilibrated with PBS, 2mM DTT.
- 2) Filtered bacterial lysate was loaded at 2mL/minute, then column was washed with PBS, 0.5% Triton, 500mM NaCl, 2mM DTT followed by PBS, 2mM DTT.
- 3) GST fusion protein was eluted with 100mM Tris, 100mM NaCl, 2mM DTT 20mM reduced glutathione pH 8.

Enzymatic Cleavage of GST Fusion Protein:

- 1) 1 unit of human thrombin was added per mg of protein in the glutathione agarose eluate.
- 2) The thrombin was allowed to react overnight at 4°C with slow stirring.
- 3) Additional thrombin (1unit/mg protein) was added to the protein solution in the morning and the cleavage reaction was monitored by SDS gel. Upon completion the reaction was stopped with 1mM PMSF.

Phosphotyrosine Agarose Chromatography

- 1) A 26 x 80mm phosphotyrosine agarose column was equilibrated with Buffer A (20mM Tris, 100mM NaCl, 2mM DTT, 2mM EDTA, pH 7.4.)
- 2) One-half of the cleaved fusion protein was loaded on the column at 2mL/minute and then washed to baseline with Buffer A. The ZAP-C was eluted with a 0-100% B gradient in 4 column volumes. (Buffer B=A+1.9M NaCl.)
- 3) The phosphotyrosine chromatography was then applied to the second half of the cleaved fusion protein. The ZAP-C fractions were collected and analyzed by UV/visible spectroscopy.

II. Preparation Of Ligands

All peptides were synthesized by automated solid-phase synthesis on Applied Biosystems 431A or 433A synthesizers using N-fluorenylmethoxycarbonyl (Fmoc) amino acids bearing TFA-labile side chain protection. Syntheses were performed on a 0.25 to 0.5 mmol scale on Rink resin (Rink, H. *Tetrahedron Lett.* **1987**, *28*, 3787-3790). Amino acids (1.0 mmol) were coupled using HBTU/HOBt/DIEA (1:1:2) as activating agents. Coupling reactions are 30-50 min. Assembled peptides are acetylated (Ac₂O/pyridine in DMA) either prior to phosphorylation (single 5 min reaction) or after phosphorylation (2 x 10 min reaction).

Phosphorylation^{39,40}

Resin-bound peptide (0.25 mmol) and tetrazole (25-40 equiv/OH) are combined and dried under vacuum in the presence of NaOH pellets in a desiccator overnight. The flask is then flushed with N₂ and DMA (6 mL) added. (tBuO)₂PNEt₂ (10 equiv/OH) is added and the mixture sonicated for 60-90 min. The resin is filtered, washed with DMA (3 x 5 mL) and CH₂Cl₂ (4 x 5 mL). CH₂Cl₂ (5 mL) and mCPBA (2-5 equiv per OH) are added and the mixture sonicated for a further 20-50 min. The resin is filtered, washed with CH₂Cl₂ (6 x 5 mL), and dried under suction.

Cleavage and Deprotection.

Phosphorylated peptide-resin is treated with either TFA: phenol: water (90:5:5), or TFA: water: ethanedithiol: anisole: phenol (95:5:5:5:2) for 90-120 min. The resin is filtered, washed with TFA and the filtrate concentrated by rotary evaporation. Diethyl ether is added to precipitate the crude peptide, which is filtered, washed with Et₂O and dried.

Peptides are purified by a combination of gel filtration, preparative HPLC, and gel desalting. Gel filtration. Crude peptide is dissolved in 0.1M NH₄HCO₃ (10-20 mL) and applied to a Sephadex G-25 column (2.6 x 100 cm) eluted at ca. 0.5 mL/min. Eluent is monitored at 254 or 278 nm and product-containing fractions are identified by analytical HPLC, pooled, and lyophilised.

Preparative HPLC. Peptides were purified on a reversed phase Kromasil C8 column (10 micron particle size, 100 Å pore size, 20 x 250 mm) with UV monitoring at 220 nm. Product was eluted with a gradient of either 60/40 MeCN/H₂O (0.1% TFA) in 0.1% aq. TFA, or 60/40 MeCN/25mM Et₃N phosphate pH7 in 25mM Et₃N phosphate. The latter buffer required that the isolated pure peptide be desalted, which was achieved by applying the lyophilised product to a Sephadex G-10 or G-15 column (2.6 x 30 cm) eluted with 0.1M NH₄HCO₃ at 1-2 mL/min.

Ligand (9)

The solid phase synthesis of ligand (9) was performed according to the procedures described above, using N α -Fmoc-(O,O-diethyl- α,α -difluorophosphonomethyl)phenylalanine (Fmoc-F₂Pmp(OEt)₂OH) (Burke, T.R.; Smyth, M.S.; Otaka, A.; Nomizu, M.; Roller, P.P.; Wolf, G.; Case R.; Shoelson, S.E. Nonhydrolyzable Phosphotyrosyl Mimetics for the Preparation of Phosphatase-Resistant SH2 Domain Inhibitors. *Biochem.* **1994**, *33*, 6490-6494) The peptide was cleaved from the resin using TFA:phenol:H₂O:ethanedithiol:anisole (18:1:1:1:1) to afford the crude bis-O,O-diethyl difluorophosphonate-containing product. Final deprotection was achieved by treatment of the crude product with TMS-I:MeCN (1:1) for 20 min at RT. The solvent was evaporated and the residue dissolved in 0.2M sodium phosphate (pH 7.0: 50 mL). The solution was washed with diethyl ether (6 x 15 mL) and lyophilised. The product was purified as described above.

III. Crystallization & Structure Determination

A. ZAP-NC was crystallized in complexes with various ligands (see Table 1) as follows:

1. Zap/ ζ 1: The binary complex of ZAP-NC and the ζ 1 19mer (Ligand 5, Table 1) was concentrated to 30 mg/ml in a buffer containing 20 mM Tris at pH 8.5, 200 mM sodium chloride, and 20 mM dithiothreitol. The complex of ZAP-NC with ζ 1 peptide was further treated with 4 mM trimethyllead acetate. Crystals spontaneously grew within 3 weeks in hanging drops containing 13.5 mg/ml protein complex and 10% polyethyleneglycol 4000, 50 mM sodium

citrate at pH 6.2, 100mM ammonium acetate, 0.005% sodium azide and 20 mM dithiothreitol over reservoirs of 20% polyethyleneglycol 4000 and 20 mM dithiothreitol. Large crystals were obtained overnight through microseeding. The crystals are monoclinic ($P2_1$, $a=50.11$, $b=63.37$, $c=54.00$ Å, and $\beta=114.44^\circ$), with one molecule per assymetric unit. Crystals of
5 ZAP-NC complexed with Ligand 8 (Table 1) were obtained under the same conditions.

2. Zap/ ζ 2: Crystals of the binary complex of ZAP-NC and the ζ 2 19mer (Ligand 6, Table 1) were obtained under conditions similar to those used for Zap/ ζ 1, with the few modifications noted below. Protein was concentrated in 10 mM Tris at pH 8.5, 0.5 M sodium chloride, 20 mM
10 DTT. 20 to 26 mg/ml protein was treated with 2mM trimethyllead acetate for one hour before crystallization set-up. The drops contained 20 mM sodium acetate and 0.2 M sodium chloride in addition to the conditions described for Zap/ ζ 1 complex. The final pH in the drops is 6.4 to 6.5. The crystallization was with Zap/ ζ 1 microseeding. (no spontaneous crystallization was obtained). The crystals are monoclinic ($P2_1$, $a=50.00$, $b=63.19$, $c=54.22$ Å, and β
15 $=114.6^\circ$), with one molecule per assymetric unit, and diffracted x-rays to a resolution of 2.2 Å.

3. Zap/ ζ 3: Crystals of the binary complex of ZAP-NC and the ζ 3 19mer (Ligand 7, Table 1) were obtained as described for ZAP-NC/ ζ 2 except for the inclusion of sodium acetate in the
20 drops. Crystallization was obtained following microseeding with Zap/ ζ 1 crystals. The crystals are monoclinic ($P2_1$, $a=49.85$, $b=63.38$, $c=54.01$ Å, and $\beta=114.43^\circ$), with one molecule per assymetric unit, and diffracted x-rays to a resolution of 2.6 Å.

4. Zap/difluorophosphono- ζ 1: Crystals of the binary complex of ZAP-NC and the
25 difluorophosphono analog of ζ 1 19mer (Ligand 9, Table 1) were obtained as described for ZAP-NC/ ζ 1 following microseeding with Zap/ ζ 1 crystals. The crystals are monoclinic ($P2_1$, $a=49.77$, $b=60.87$, $c=53.58$ Å, and $\beta=117.09^\circ$), with one molecule per assymetric unit, and diffracted x-rays to a resolution of 2.2 Å.

30 5. Zap/IgE γ TAM 19mer: Crystals of the binary complex of ZAP-NC and the IgE γ TAM 19mer (Ligand 1, Table 1) were obtained as described for ZAP-NC/ ζ 1, but at pH 6.6, following microseeding with Zap/ ζ 3 crystals.

6. Zap/IgE γ TAM 16mer analog: Crystals of the binary complex of ZAP-NC and the IgE γ TAM
35 16mer analog (Ligand 10, Table 1) were obtained as described for ZAP-NC/ ζ 1, but at pH 7.0 with microseeding of Zap/gamma crystals in the present of 2% glycerol.

7. Zap/Ligand 11: ZAP-NC was mixed with 3mM Ligand 11 (Table 1) and treated with trimethyllead acetate. Crystals were obtained from a mixture of 12.5 mg/ml ZAP-NC protein,

1.5 mM Ligand 11 and 1.5 mM trimethyllead acetate in a solution of 10% PEG 4K, 50 mM Tris at pH 8.23 and 10 mM DTT.

B. SYK-NC was crystallized with and without ligand (see Table 1), as follows:

- 5 1. SYK-NC (without ligand) was concentrated in 20 mM Tris at pH 8.0, 0.2 M sodium chloride, 40 mM DTT. Crystals were obtained with 12.5 mg/ml protein in 10% PEG 4k, 0.2 M sodium chloride, 50 mM phosphate buffer, pH 7.3, 30 mM DTT.
2. syk/ ζ 1: Crystals of the binary complex of SYK-NC and the ζ 1 19mer (Ligand 6, Table 1)
10 were obtained with 11mg/ml syk/ ζ 1 complex in 50 mM Hepes at pH 7.2, 9% PEG4k, 4% 2-propanol, 0.25 M sodium chloride, 30 mM DTT.
3. syk/ γ 19:
Crystals of the binary complex of SYK-NC and the IgE γ 19mer (Ligand 1, Table 1)
15 were obtained with 11mg/ml syk/ ζ 1 complex in 50 mM Tris at pH 7.68 or 50 mM Imidazole at pH 7.36, 11% PEG4k, 3.5% 2-propanol, 0.3 M sodium chloride, 30 mM DTT.
4. syk/ γ 15: Crystals of the binary complex of SYK-NC and the IgE γ 15mer (Ligand 2, Table 1) were obtained under several different sets of conditions:
20
 - a. 18mg/ml complex in 10% PEG 4K, 50mM citrate/phosphate buffer at pH 5.6, 0.1 M ammonium chloride, 0.01% sodium azide, 30mm DTT.
 - b. 18mg/ml complex in 10% PEG 4K, 50mM sodium citrate buffer at pH 5.6, 0.1 M ammonium acetate, 0.5% methylpentanediol, 0.01% sodium azide, 30mM DTT.
25
 - c. 18mg/ml complex in 10% PEG 6K, 50mM phosphate buffer at pH 6.2, 0.2 M sodium chloride, 50 mM ammonium acetate, 0.01% sodium azide, 30mM DTT.
5. syk/ γ 25: Crystals of the binary complex of SYK-NC and the IgE γ 25mer (Ligand 3, Table 1) were obtained under several different sets of conditions:
30
 - a. 12.5 mg/ml SYK-NC/ligand complex in 16% PEG 2K, 50 mM sodium citrate, 5% glycerol, 20 mM DTT, pH6.46.
 - b. 12.5 mg/ml SYK-NC/ligand complex in 10% PEG 4K, 50 mM sodium citrate, 0.1 M ammonium acetate, 20 mM DTT, pH6.3.
35
6. syk/ γ Tam 27mer: Crystals of SYK-NC with the IgE γ 27mer (Ligand 4, Table 1) were obtained as described immediately above in the case of the IgE γ 25mer (Ligand 3, Table 1).

C. ZAP-NC:ζ1 three dimensional structure

X-ray diffraction data obtained using crystals of the ZAP-NC:ζ1 complex (one complex per unit cell) were analyzed as described elsewhere (see also Table 2), yielding coordinates defining the three dimensional structure of the crystalline complex. The structure of the ZAP-NC:ζ2 complex was determined by molecular replacement using the X-ray diffraction data for the ZAP-NC:ζ2 complex and the structure of the ZAP-NC:ζ1 complex as represented by the coordinates of Appendix I. Rigid body refinement was conducted using the ZAP-NC:ζ1 model. The resultant model was rebuilt by replacement of the ζ1 peptide with ζ2, followed by conventional refinement. The X-ray data of the ZAP-NC:ζ1 "dimeric" complex (two complexes per unit cell) was also solved by molecular replacement using the ZAP-NC:ζ1 ("monomer") structure. Rigid body refinement was conducted using the complete ZAP-NC:ζ1 "monomeric" model, followed by rigid body refinement using individual SH2 domains and rebuilding of the helical domain region. Those structural coordinates are set forth in Protein Databank format in Appendix I (ZAP-NC:ζ1 complex, "monomeric"), Appendix II (ZAP-NC:ζ2 complex) and Appendix III (ZAP-NC:ζ1 complex, "dimeric"), below. Such data may be transferred to any desired medium, and formatted as desired, for the practitioner's computer.

This invention encompasses those coordinates as well as any translation or rotation or the like thereof which maintains the internal coordinates, i.e., which maintains their intrinsic, internal relationship. Those skilled in the art will appreciate that the coordinates may be subjected to other transformations including, e.g. molecular mechanics calculations such as dynamic simulation, minimization, etc. This invention further encompasses the use of coordinates of ZAP-NC or the corresponding region of other ZAP family members, and in particular, the coordinates set forth in Appendix I, Appendix II or Appendix III, in conducting such transformations (or more extensive transformations such as the generation of alternative conformations), as well as the products of such transformations (i.e., derivatives of the coordinates).

IV. Modeling

To illustrate the receptor site mapping approach, we used the Molecular Discovery suite of programs (Molecular Discovery Ltd; Goodford, P.J. "A Computational Procedure for Determining Energetically Favorable Binding Sites on Biologically Important Macromolecules" *J. Med. Chem.* **1985**, *28*, 849-857) on a Silicon Graphics Onyx workstation running Irix 5.2 to evaluate ZAP-NC as follows:

(1) The Protein Data Bank (PDB) coordinate file of ZAP-NC + ζ1 was stripped of the ζ1 peptide and all crystallographically observed water molecules (using the Remove Atom feature of Sybil).

(2) The resultant PDB file was merged with a set of molecular mechanics parameters that are suitable for the study of proteins. (Suitable such parameter sets include the user extensible data files which typically accompany the computer program.)

5

(3) A three-dimensional box that encapsulated the entire peptide binding face of each SH2 domain and the interfacial regions between the two domains was generated. The box dimensions were 60Å x 40Å x 37Å, and a regular lattice of points positioned at 0.5Å intervals was designated to fill the box. The box position is illustrated in FIG. 6.

10

(4) At each lattice point, 46 atomic and polyatomic probes were positioned sequentially. These probes encompass parameters that are representative of a large variety of chemical moieties. The energy of interaction between each probe with the protein was computed at each point of the lattice according to an empirical potential energy function that includes explicit terms for Lennard-Jones, electrostatic, and hydrogen-bonding potentials. The degree of burial for each probe was computed by the method of images.

15

(5) A binary contour map was generated, which can be used to visualize the sites of favorable interaction of a given probe at a given potential energy. An example is provided in FIG. 7.

20

Data from this receptor site mapping experiment were transferred to a DAT tape written in tar format on a Silicon Graphics Onyx workstation running Irix 5.2. The map data uses the file extensions .cnt and .lont for the binary contour maps and the ASCII output, respectively. The orientation of the maps corresponds to our file zapNC-z1.pdb, which is in the Brookhaven Protein Databank format. The contour files are readable by Sybyl 6.1 (Tripos, Inc., St. Louis, Mo). Filenames correspond to the probe nomenclature in the Molecular Discover Programmes, Version 12.

25

Information provided by site mapping *via* these or other programs as described in the Computational Methods section can be used to determine the spatial arrangement of potential pharmacophores, and thus provide the seed points for searches of 3-D databases or *de Novo* programs that attempt to grow from or link together the selected points. For an illustration of a pharmacophoric substructure for use in computational approaches, see e.g. Fesik (1993) cited elsewhere herein.

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For example, the data defining binary contour maps may be displayed as 3D structures identifying preferred locations for selected functional groups using a software program such as Sybyl. By visual inspection of those displayed representations, one can select corresponding compounds containing moieties appropriately disposed with respect to each other such that they

coincide with preferred locations shown by the maps (i.e., locations identified for each selected functional group characterized by favorable interaction energies with the target protein). Using computer programs such as LeapFrog one may "grow" a compound stochastically from one or more selected moieties located within appropriately mapped locations. Alternatively, starting with mapped favorable locations for two or more moieties, one may define "vectors" defining the spatial relationship between those moieties, and then use those vectors to select or design compounds embodying the selected moieties in the appropriate spatial relationship. Databases containing 3D structures of potential ligands contain experimentally determined or computationally generated structures. The selection or design process may be conducted with the aid of computer using a programs such as ALADDIN (Van Drie et al, 1989, J Comput-Aided Mol Des 3, 225-251), MACCS-3D (Mooock et al, 1990, Chemical Information Systems, (Eds, Bawden & Mitchell, Chichester, pp 42-49), 3D SEARCH, ChemDBS-3D, SYBYL/3DB and CAVEAT. See e.g., Fesik, 1993, J Biomolecular NMR 3, 261-269.

V. Assays

(1) Binding Assays

(a) Competitive Binding Assays: Binding may be measured by competition using surface plasmon resonance and allied technologies (Malmqvist, M. *Current Opinions in Immunology* 5, 282-286; (1993); Malmqvist, M., *Nature* 361:186-187 (1993); Jonsson, U. and Malmqvist, M., *Advances in Biosensors*, JAI Press Ltd., London, 1992, pp. 291-336; Jonsson, U. et al., *BioTechniques* 11(5):620-627 (1991). SH2 domains are typically pre-incubated with various concentrations of test compound and the ability of the test compound to competitively inhibit SH2 binding to an immobilized phosphopeptide ligand measured. Results are compared to binding measured in the absence of competitor and expressed as percent inhibition. IC50 values reflect the concentration of inhibitor required to reduce binding by 50%. Specifics of individual assays are described below. All assays are run in HEPES Buffered Saline (HBS) composed of 10 mM HEPES (pH 7.4) / 150 mM NaCl / 3.4 mM EDTA / 0.05% Tween 20 ± 10 mM DTT at 25°C.

Primary Screen -- Test compound (e.g. 50uM) is preincubated with the target SH2 in HBS ± 10 mM DTT for a minimum of 1 hr at 4°C. The ability of the compound to inhibit binding of the SH2 domain to a target phosphopeptide is measured using SPR. Compounds that inhibit SH2/phosphopeptide association by a pre-determined increment (e.g. ≥50%) are subjected to a secondary screen.

Secondary Screen -- Log dilutions of test compound (10^{-4} , 10^{-5} , 10^{-6} , ...) are preincubated with the target SH2 in HBS ± 10 mM DTT. The ability of the compound to inhibit binding of the

SH2 domain to the target phosphopeptide is measured using SPR. IC50s are determined from the plot of per cent inhibition (compared to SH2 domain in the absence of inhibitor) vs. compound concentration.

- 5 • **Specifics of Tandem ZAP Assay** : A peptide corresponding to the ζ -chain ITAM-1 of the human T-cell receptor [NQLY(PO₄)NELNLGRREEY(PO₄)DVLD] [SEQ ID NO 15] was synthesized as a part of a larger peptide [Ac-KGGNQLY(PO₄)NELNLGRREEY-(PO₄)DVLD-NH₂] [SEQ ID NO 16] and used to generate a ZAP-sensitive biosensor surface. Specifically, a Biosensor Chip CM5 was activated with 200 mM EDC / 50 mM NHS to generate a surface reactive to primary amines and the ITAM peptide immobilized through the N-terminal lysine. Unreacted sites were blocked with ethanolamine (1 M in water) and the chip cleaned of non-covalently bound peptide using 6 M guanidine hydrochloride. Assays were run in HBS + 10 mM DTT using 10 nM pp70^{ZAP}(1-259) +/- test inhibitor.
- 10
- 15 • **Specifics of N-ZAP Assay**: A peptide corresponding to the ζ -chain ITAM-1 of the human T-cell receptor [NQLYNELNLGRREEY(PO₄)DVLD] [SEQ ID NO 17] was synthesized as a part of a larger peptide [Ac-KGGNQLYNELNLGRREEY-(PO₄)DVLD-NH₂] [SEQ ID NO 18] and used to generate a ZAP-sensitive biosensor surface as described above. Assays were run in HBS + 10 mM DTT using pp70^{ZAP}(1-259)R195K (a mutant where Arginine-195 is replaced by Lysine to inactivate the C-terminal SH2 domain) +/- test inhibitor.
- 20
- **Specifics of C-ZAP Assay**: A peptide corresponding to the ζ -chain ITAM-1 of the human T-cell receptor [NQLYNELNLGRREEY(PO₄)DVLD] [SEQ ID NO 17] was synthesized as a part of a larger peptide [Ac-KGGNQLYNELNLGRREEY-(PO₄)DVLD-NH₂] [SEQ ID NO 18] and used to generate a ZAP-sensitive biosensor surface as described above. Assays were run in HBS + 10 mM DTT using pp70^{ZAP}(1-259)R37K (a mutant where Arginine-37 is replaced by Lysine to inactivate the N-terminal SH2 domain) or pp70^{ZAP} (161-259) +/- test inhibitor.
- 25
- 30 • **Specifics of Tandem Syk Assay** : A pp72^{Syk} peptide ligand corresponding to the γ -chain ITAM of human Fc ϵ RI [DGVY(PO₄)TGLSTRNQETY(PO₄)ETLK][SEQ ID NO 19] was synthesized as part of a larger peptide [Ac-CGGDGVY(PO₄)TGLSTRNQETY-(PO₄)ETLK-NH₂] [SEQ ID NO 20] and used to generate a Syk-sensitive biosensor surface. Specifically, a Biosensor Chip CM5 was activated with 200 mM ethyl-3-(3-dimethylaminopropyl)-carbodiimide hydrochloride (EDC)/ 50 mM N-hydroxysuccinimide (NHS) to generate a surface reactive to primary amines; treated with ethylenediamine to generate a surface rich in primary amines; activated with *m*-maleimidobenzoyl-N-hydroxysuccinimide ester (sulfo-MBS; 50 mM in 25 mM NaHCO₃) to generate a surface reactive to free thiols; and the ITAM peptide immobilized through the N-terminal cysteine. Unreacted sites were
- 35

blocked with β -mercaptoethanol and the chip cleaned of non-covalently bound peptide using 6 M guanidine hydrochloride. Assays were run in HBS using 20 nM pp72^{Syk}(1-265) +/- test inhibitor.

- 5 • **Specifics of C-Syk Assay** : A pp72^{Syk} peptide ligand corresponding to a hemiphosphorylated γ -chain ITAM of human Fc ϵ RI [DGVY(PO₄)TGLSTRNQETYETLK] was synthesized as part of a larger peptide [Ac-CGGDGVY(PO₄)TGLSTRNQETYETLK-NH₂] and used to generate a C-Syk-sensitive biosensor surface as described above for tandem syk. Assays were run in HBS using 270 nM pp72^{Syk}(163-265) +/- test inhibitor.

10

(2) Cell-based Assays

(a) T cell assay (T cell receptor-dependent transcription)

- 15 ***Purpose and description of assay:*** This assay measures the ability of a compound to inhibit TCR activation of the IL-2 transcription pathway in the human Jurkat T cell line. These Jurkat cells have been transfected with a construct containing the β -galactosidase gene under the control of an upstream promoter element, the NF-AT binding site, which normally regulates IL-2 production.¹⁸ When cells are activated, β -galactosidase is produced.

- 20 ***Drug Treatment of Cells and Stimulation:*** The compounds to be assayed are serially diluted into assay buffer and each dilution is added to the Jurkat cells for a 1 hour pre-incubation. After the pre-incubation, the cells are transferred to plates coated with antibody to the CD3 component of the TCR. This antibody crosslinks the TCR, leading to activation of receptor signaling pathways. The cells are incubated for 4 hours, then the amount of β -gal
25 produced is measured.

- Measurement of β -galactosidase:*** The assay is used to quantitate the amounts of β -galactosidase produced is the MUG assay. MUG, 4-methylumbelliferone galactose, is cleaved by β -galactosidase to form a fluorescent derivative, 7-hydroxy-4-methylcoumarin. The observed
30 fluorescence correlates with the amount of cleavage product, and thus with the amount of β -galactosidase. Production of β -gal without the addition of compound determines the 100% value for each well. The raw data is converted into "percent of control", triplicate wells are averaged, and then the data is plotted as % of control release vs. concentration of test compound.

35 (b) Cytotoxic T Lymphocyte killing

Purpose and description of assay: This assay measures the ability of a compound to inhibit the cytolytic function of human cytotoxic lymphocyte lines. Human CD8⁺ CTL were generated from mitogen-stimulated peripheral blood lymphocytes. Mitogen activated cells were grown in IL2 and re-stimulated every 3 weeks with antibodies directed against the T cell

receptor complex and CD8+ cells were sorted and cloned. Clone T9 was selected for use in the CTL assay. Since the T cells were selected nonspecifically, i.e. no specific antigen was used for induction, the target chosen for the assay was the B cell hybridoma OKT3. This cell line expresses anti-CD3 on its surface (an antibody against one of the subunits of the T cell receptor). The recognition of the T cell receptor by the antibody induces the cytolytic process of the target

Drug Treatment of Cells and Stimulation: The compounds to be assayed are serially diluted into assay buffer and each dilution is added to the CTL's for a 1 hour pre-incubation.

- 10 After the pre-incubation, the cells are mixed with ^{51}Cr labelled OKT3 cells at a ratio of 3:1 (effector:target) and incubated for 3 hours. This ratio of effector to targets results in approximately 30% specific release.

- 15 **Measurement of ^{51}Cr release :** The cell mixture is centrifuged and the supernatant is removed. The amount of ^{51}Cr released into the media is measured on a γ counter and the specific release is determined using detergent lysed target cells as the 100% value. The data is plotted as % specific release vs. concentration of test compound.

(3) Animal Models:

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(a) DELAYED TYPE HYPERSENSITIVITY

- An initial screening model is delayed type hypersensitivity. Mouse abdomens are painted with sensitizing chemicals (sensitization) such as dinitrofluorobenzene or oxazalone. Seven days later the ears of sensitized mice are painted (challenge) with a lower concentration of the compound. Antigen processing and presentation, T lymphocyte activation, leukocyte infiltration, humoral mediator release, increased microvascular permeability, and plasma exudation all result from challenge of sensitized mice and lead to edema formation. Edema presents as a two- to three- fold increase in ear thickness within twenty-four hours.

- 30 The test compounds or standards can be applied (topical or parenteral) at various times before or after the sensitization or challenge phases. Increased ear thickness is prevented by several compounds including immunosuppressive agents and steroids. This model is a primary model for contact dermatitis.

35 (b) ALLOGENEIC SKIN TRANSPLANTATION

An allogeneic skin transplant model is used to identify immunosuppressive activity of test compounds. In this model, donor mouse thoracic skin (Balb/c) is surgically grafted onto the thorax of recipient mice (C57bl/6). Host rejection of the graft is evidenced by erythema, drying out, and retraction of donor skin. The mean graft survival time is 10 to 11 days, with

80% of the grafts being rejected by 12 days. Active novel immunosuppressive compounds, like existing immunosuppressive compounds, will prolong graft survival.

(c) POPLITEAL LYMPH NODE HYPERPLASIA

- 5 This model directly assesses T lymphocyte proliferation *in vivo*. Spleen cells, obtained from Balb/c mice, are isolated and administered into the foot pads of C3H mice. Within four days, the popliteal lymph nodes can be removed from the recipient mice and weighed. Other hematological assessments including FACS scanning for T lymphocyte subpopulations may also be performed. Active compounds, like existing immunosuppressive compounds, will inhibit the increase in
- 10 node mass.

(d) RHEUMATOID ARTHRITIS

- Several models are available for assessment of anti-arthritic activity, including adjuvant-induced, carageenan-induced, and collagen-induced arthritis in rats and/or mice. Paw pads are
- 15 injected with one of these agents. Paws increase in volume, and measurements are made between 20 and 30 days later. The ability of test compounds to prevent the induction of paw swelling is tested with daily treatment for 12 consecutive days following the injection of inducing agent. The ability for the test compounds to reverse the progression of the paw swelling is tested by
- 20 administration of the compound for 12 consecutive days beginning on the twelfth day following the injection of inducing agent. Paw swelling measurements are made by water displacement plethysmography. Histology is also an appropriate endpoint for these studies. The MRL/lpr-mouse model, described above, is required for the rheumatoid arthritis indication. This model is a spontaneous autoimmune model that develops rheumatoid arthritis resembling the human condition, including the presence of circulating rheumatoid factor, pannus formation, and bone
- 25 and cartilage erosion.

(e) SYSTEMIC LUPUS ERYTHEMATOSUS

- Systemic lupus erythematosus is another autoimmune disease with several animal models. Several murine strains develop spontaneous SLE. One such strain is MRL/lpr-mice. These
- 30 mice, over time (20 to 30 weeks) develop auto-antibodies against dsDNA, nuclear antigens, and renal basement membrane. This leads to complement fixation and immune complex formation. Damage to the kidney becomes apparent with the onset of proteinuria. Many of the other physiologic, hematologic, and immunologic aberrations described below for the CGVHD model are present. Immunosuppressive compounds such as cyclosporin, cyclophosphamide, and
- 35 leflunomide can prevent and reverse the course of disease in this model. Interestingly, these mice also develop pathologies akin to rheumatoid arthritis.

The murine chronic graft versus host disease model (CGVHD, described below) is a model of SLE that contains many of the clinical features of SLE. Activity in this model has been shown to be predictive of activity in the more clinically relevant SLE models.

5 **(f) TRANSPLANTATION**

Allograft transplantation (skin graft) assay is often used as an initial test of immunosuppressive activity. While this model is useful as a screen, it may be supplemented with assays based on animal transplant models involving transplantation of internal organ (heart, liver, kidney, bone marrow) with use of "clinically acceptable" physiologic endpoints to assess graft survival. Efficacy of test compounds in only a very limited number of these rodent models is required. Following observation of activity in a rodent model, the test compounds are typically tested in further animal models (e.g., canine, porcine or non-human primate). Active compounds decrease acute and chronic rejection and prolong transplant survival.

15 **(g) GRAFT VS. HOST DISEASE**

Chronic GVHD (CGVHD) can be used to model CD4⁺-dependent humoral immunity. It is induced in BDF₁ mice (which are progeny of DBA/2 male x C57BL/6 female matings) by administering to them isolated spleen:lymph node cells from DBA/2 mice. This results in: a) dysregulation and stimulation of CD4⁺ T lymphocyte (Ly1⁺; murine marker) activity due to incompatibilities at MHC II molecules, and b) abnormal T-B lymphocyte cooperation. The resulting pathological state, in many ways, mimics systemic lupus erythematosus (SLE). Several measurable endpoints develop within 14 days; including, circulating anti-host IgG and IgE antibodies, altered T and B lymphocyte proliferation activity measured *in vitro*, complement utilization, hemagglutination, slow progressive wasting, dermal aberrations, splenomegaly, lymphoid hyperplasia, and proteinuria. Only a few of these endpoints need to be measured. Active compounds are those which limit T lymphocyte dysregulation and abrogate changes in these variables. Many steroids (e.g., prednisolone), cyclosporine, FK-506, cyclophosphamide, and leflunomide are all active in this model and can be used as positive controls

30 The acute GVHD model (AGVHD) is also produced in BDF₁ mice. In this case, isolated spleen:lymph node cells from C57BL/6 mice are administered. This results in dysregulation and stimulation of CD8⁺ T lymphocytes due to incompatibilities in the MHC I molecules. Elevated cytokine levels and donor clonal expansion occurs. Ultimately, donor cytotoxic T lymphocytes and NK cells rapidly reject host tissue and cause relatively rapid death of the recipient. The progression of AGVHD in this model is assessed by measurement of hematologic abnormalities (including T cell number and type), cytokine elevations (TNF, IL-1, IL-2, and/or IL-4), low body weight, hypoglobulinemia, circulating hematologic characteristics indicative of aplastic anemia (granulocytopenia, thrombocytopenia), *ex vivo* NK or CTL activity, and host survival.

Active compounds are those which abrogate changes in the variables, and prolong survival over 4 to 6 weeks.

(h) ASTHMA

5 Asthma offers another opportunity for safe immunosuppressive therapy. Atopic asthmatics have antibody mediated hypersensitivity and the often occurring late phase reaction is likened to a DTH response. Asthma has only recently been defined as an inflammatory disease (1992). Since then, several publications from prominent asthmatologists demonstrate the presence of activated CD4⁺ and CD8⁺ T lymphocytes in bronchoalveolar lavage fluid and blood of atopic
10 asthmatics. The ratios of these cells changes in asthmatic conditions. Furthermore, several of the T cell associated cytokines (IL-1, IL-2, IL-4, IL-5, and TNF) are all implicated in clinical and experimental asthma. Inflammatory events in asthma are now considered to be T lymphocyte driven. Initial clinical trials with inhaled cyclosporin suggest that local immunosuppression can ameliorate airway hyperreactivity - the underlying defect in asthma.

15

The guinea pig model of antigen-induced pulmonary aberrations is used as a model for asthma. These animals are actively sensitized to ovalbumin to generate high circulating titers of anti-ovalbumin antibody with seroconversion to the IgE class, as is the case with atopic asthmatics. Aerosol challenge of sensitized guinea pigs results in measurable eosinophil rich pulmonary
20 infiltrates (approximately a 16-fold increase in eosinophils), pulmonary edema, and mucous plugging of the small airways; all culminating in the expression of the underlying defect in asthma- airway hyperreactivity (approximately a 3 to 4-fold increase in reactivity). Acute bronchoconstriction is obviously present and points the aforementioned presence of the pathophysiologic sequelae. Active compounds are those which lessen or abrogate such symptoms.

25

The above description is meant to illustrate, rather than limit the scope of the invention. Given the foregoing description, numerous variations in the materials or methods employed in performing the invention will be obvious to one skilled in the art. Any such obvious variation is to be considered within the scope of the invention.

30

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Appendix I: Coordinates for the 3D structure of ZAP-NC:z1*

REMARK FILENAME="test-slow.pdb"

5 REMARK TOPH19.pep -MACRO for protein sequence
created by user: marcos

	Atom	Atom	amino acid					temp	
	<u>Number</u>	<u>type</u>	<u>residue</u>		<u>x</u>	<u>y</u>	<u>z</u>	<u>occ</u>	<u>factor</u>
10	ATOM	1 CB	ASP	3	-1.489	-4.706	36.906	1.00	37.30
	ATOM	2 CG	ASP	3	-2.232	-3.399	37.163	1.00	38.04
	ATOM	3 OD1	ASP	3	-2.949	-3.304	38.181	1.00	39.49
	ATOM	4 OD2	ASP	3	-2.094	-2.461	36.353	1.00	34.64
	ATOM	5 C	ASP	3	-1.755	-4.886	34.408	1.00	34.63
15	ATOM	6 O	ASP	3	-0.595	-4.867	34.003	1.00	34.56
	ATOM	7 HT1	ASP	3	-0.506	-6.812	35.572	1.00	0.00
	ATOM	8 HT2	ASP	3	-1.947	-7.433	34.967	1.00	0.00
	ATOM	9 N	ASP	3	-1.527	-6.899	35.753	1.00	40.12
	ATOM	10 HT3	ASP	3	-1.707	-7.382	36.652	1.00	0.00
20	ATOM	11 CA	ASP	3	-2.095	-5.522	35.754	1.00	36.56
	ATOM	12 N	PRO	4	-2.771	-4.385	33.690	1.00	31.82
	ATOM	13 CD	PRO	4	-4.186	-4.460	34.087	1.00	32.51
	ATOM	14 CA	PRO	4	-2.640	-3.739	32.379	1.00	29.95
	ATOM	15 CB	PRO	4	-4.058	-3.243	32.113	1.00	30.71
25	ATOM	16 CG	PRO	4	-4.895	-4.275	32.774	1.00	31.34
	ATOM	17 C	PRO	4	-1.652	-2.579	32.341	1.00	28.61
	ATOM	18 O	PRO	4	-1.211	-2.170	31.265	1.00	30.48
	ATOM	19 N	ALA	5	-1.333	-2.029	33.509	1.00	25.13
	ATOM	20 H	ALA	5	-1.777	-2.325	34.322	1.00	0.00
30	ATOM	21 CA	ALA	5	-0.411	-0.905	33.592	1.00	21.95
	ATOM	22 CB	ALA	5	-1.029	0.206	34.437	1.00	20.80
	ATOM	23 C	ALA	5	0.973	-1.261	34.121	1.00	20.21
	ATOM	24 O	ALA	5	1.884	-0.442	34.064	1.00	19.51
	ATOM	25 N	ALA	6	1.151	-2.504	34.553	1.00	19.03
35	ATOM	26 H	ALA	6	0.413	-3.137	34.469	1.00	0.00
	ATOM	27 CA	ALA	6	2.422	-2.958	35.124	1.00	18.99
	ATOM	28 CB	ALA	6	2.339	-4.443	35.462	1.00	22.76
	ATOM	29 C	ALA	6	3.674	-2.679	34.296	1.00	16.60
	ATOM	30 O	ALA	6	4.755	-2.485	34.847	1.00	14.22

	ATOM	31	N	HIS	7	3.527	-2.665	32.977	1.00	15.98
	ATOM	32	H	HIS	7	2.628	-2.813	32.643	1.00	0.00
	ATOM	33	CA	HIS	7	4.660	-2.422	32.091	1.00	16.26
	ATOM	34	CB	HIS	7	4.424	-3.096	30.736	1.00	16.78
5	ATOM	35	CG	HIS	7	3.194	-2.622	30.027	1.00	16.42
	ATOM	36	CD2	HIS	7	3.033	-1.729	29.021	1.00	16.56
	ATOM	37	ND1	HIS	7	1.933	-3.092	30.324	1.00	15.90
	ATOM	38	HD1	HIS	7	1.674	-3.788	30.967	1.00	0.00
	ATOM	39	CE1	HIS	7	1.049	-2.511	29.534	1.00	16.52
10	ATOM	40	NE2	HIS	7	1.692	-1.681	28.734	1.00	17.76
	ATOM	41	HE2	HIS	7	1.276	-1.120	28.048	1.00	0.00
	ATOM	42	C	HIS	7	5.014	-0.943	31.891	1.00	17.19
	ATOM	43	O	HIS	7	6.082	-0.629	31.357	1.00	18.03
	ATOM	44	N	LEU	8	4.125	-0.038	32.300	1.00	14.61
15	ATOM	45	H	LEU	8	3.316	-0.310	32.782	1.00	0.00
	ATOM	46	CA	LEU	8	4.382	1.393	32.143	1.00	14.75
	ATOM	47	CB	LEU	8	3.106	2.216	32.371	1.00	15.09
	ATOM	48	CG	LEU	8	2.051	2.374	31.267	1.00	19.47
	ATOM	49	CD1	LEU	8	2.669	2.167	29.891	1.00	21.37
20	ATOM	50	CD2	LEU	8	0.911	1.417	31.472	1.00	23.01
	ATOM	51	C	LEU	8	5.481	1.879	33.085	1.00	13.31
	ATOM	52	O	LEU	8	5.432	1.628	34.288	1.00	13.01
	ATOM	53	N	PRO	9	6.478	2.609	32.551	1.00	13.43
	ATOM	54	CD	PRO	9	6.691	2.982	31.141	1.00	13.38
25	ATOM	55	CA	PRO	9	7.571	3.113	33.385	1.00	12.50
	ATOM	56	CB	PRO	9	8.523	3.736	32.363	1.00	12.42
	ATOM	57	CG	PRO	9	7.617	4.159	31.267	1.00	14.81
	ATOM	58	C	PRO	9	7.117	4.122	34.440	1.00	10.81
	ATOM	59	O	PRO	9	7.783	4.297	35.459	1.00	12.13
30	ATOM	60	N	PHE	10	5.985	4.776	34.200	1.00	11.91
	ATOM	61	H	PHE	10	5.502	4.601	33.371	1.00	0.00
	ATOM	62	CA	PHE	10	5.451	5.761	35.140	1.00	11.80
	ATOM	63	CB	PHE	10	4.981	7.029	34.406	1.00	10.49
	ATOM	64	CG	PHE	10	4.009	6.769	33.289	1.00	12.16
35	ATOM	65	CD1	PHE	10	2.642	6.722	33.536	1.00	11.91
	ATOM	66	CD2	PHE	10	4.460	6.579	31.985	1.00	12.16
	ATOM	67	CE1	PHE	10	1.738	6.492	32.505	1.00	14.05
	ATOM	68	CE2	PHE	10	3.561	6.348	30.949	1.00	11.03
	ATOM	69	CZ	PHE	10	2.198	6.305	31.210	1.00	10.40

	ATOM	70	C	PHE	10	4.348	5.220	36.063	1.00	10.35
	ATOM	71	O	PHE	10	3.648	5.994	36.714	1.00	9.59
	ATOM	72	N	PHE	11	4.172	3.901	36.085	1.00	10.23
	ATOM	73	H	PHE	11	4.752	3.312	35.559	1.00	0.00
5	ATOM	74	CA	PHE	11	3.179	3.263	36.944	1.00	9.09
	ATOM	75	CB	PHE	11	2.539	2.060	36.241	1.00	8.78
	ATOM	76	CG	PHE	11	1.602	1.266	37.119	1.00	8.82
	ATOM	77	CD1	PHE	11	0.374	1.787	37.504	1.00	9.98
	ATOM	78	CD2	PHE	11	1.949	-0.011	37.548	1.00	12.08
10	ATOM	79	CE1	PHE	11	-0.497	1.046	38.301	1.00	10.58
	ATOM	80	CE2	PHE	11	1.083	-0.759	38.345	1.00	11.57
	ATOM	81	CZ	PHE	11	-0.141	-0.230	38.722	1.00	10.29
	ATOM	82	C	PHE	11	3.904	2.819	38.214	1.00	10.01
	ATOM	83	O	PHE	11	4.890	2.084	38.157	1.00	10.38
15	ATOM	84	N	TYR	12	3.421	3.279	39.360	1.00	8.54
	ATOM	85	H	TYR	12	2.645	3.868	39.342	1.00	0.00
	ATOM	86	CA	TYR	12	4.050	2.962	40.628	1.00	7.85
	ATOM	87	CB	TYR	12	4.154	4.229	41.471	1.00	9.01
	ATOM	88	CG	TYR	12	5.234	5.165	40.994	1.00	9.41
20	ATOM	89	CD1	TYR	12	5.079	5.911	39.829	1.00	11.88
	ATOM	90	CE1	TYR	12	6.098	6.737	39.371	1.00	10.68
	ATOM	91	CD2	TYR	12	6.432	5.275	41.688	1.00	10.27
	ATOM	92	CE2	TYR	12	7.444	6.094	41.242	1.00	10.04
	ATOM	93	CZ	TYR	12	7.275	6.821	40.086	1.00	10.17
25	ATOM	94	OH	TYR	12	8.296	7.629	39.659	1.00	14.36
	ATOM	95	HH	TYR	12	8.048	7.993	38.798	1.00	0.00
	ATOM	96	C	TYR	12	3.398	1.856	41.436	1.00	8.85
	ATOM	97	O	TYR	12	3.909	1.466	42.483	1.00	9.35
	ATOM	98	N	GLY	13	2.278	1.340	40.950	1.00	11.20
30	ATOM	99	H	GLY	13	1.920	1.683	40.111	1.00	0.00
	ATOM	100	CA	GLY	13	1.597	0.284	41.669	1.00	12.09
	ATOM	101	C	GLY	13	0.762	0.814	42.818	1.00	12.99
	ATOM	102	O	GLY	13	0.266	1.940	42.769	1.00	12.85
	ATOM	103	N	SER	14	0.635	0.010	43.865	1.00	12.55
35	ATOM	104	H	SER	14	1.068	-0.867	43.854	1.00	0.00
	ATOM	105	CA	SER	14	-0.167	0.356	45.027	1.00	14.38
	ATOM	106	CB	SER	14	-0.680	-0.931	45.685	1.00	13.42
	ATOM	107	OG	SER	14	-1.532	-0.657	46.784	1.00	21.30
	ATOM	108	HG	SER	14	-1.068	-0.007	47.331	1.00	0.00

	ATOM	109	C	SER	14	0.542	1.232	46.060	1.00	15.49
	ATOM	110	O	SER	14	0.894	0.760	47.144	1.00	18.54
	ATOM	111	N	ILE	15	0.748	2.506	45.737	1.00	14.76
	ATOM	112	H	ILE	15	0.428	2.829	44.869	1.00	0.00
5	ATOM	113	CA	ILE	15	1.390	3.423	46.676	1.00	12.31
	ATOM	114	CB	ILE	15	2.571	4.210	46.040	1.00	12.37
	ATOM	115	CG2	ILE	15	3.712	3.256	45.687	1.00	13.51
	ATOM	116	CG1	ILE	15	2.101	5.014	44.827	1.00	11.08
	ATOM	117	CD	ILE	15	3.131	6.016	44.347	1.00	12.11
10	ATOM	118	C	ILE	15	0.354	4.398	47.226	1.00	10.69
	ATOM	119	O	ILE	15	-0.750	4.488	46.701	1.00	11.71
	ATOM	120	N	SER	16	0.700	5.099	48.299	1.00	8.45
	ATOM	121	H	SER	16	1.588	5.018	48.689	1.00	0.00
	ATOM	122	CA	SER	16	-0.219	6.053	48.899	1.00	12.16
15	ATOM	123	CB	SER	16	0.073	6.199	50.393	1.00	8.73
	ATOM	124	OG	SER	16	1.380	6.711	50.597	1.00	11.59
	ATOM	125	HG	SER	16	1.483	6.783	51.560	1.00	0.00
	ATOM	126	C	SER	16	-0.073	7.411	48.225	1.00	11.37
	ATOM	127	O	SER	16	0.883	7.640	47.474	1.00	10.80
20	ATOM	128	N	ARG	17	-1.006	8.315	48.509	1.00	10.26
	ATOM	129	H	ARG	17	-1.743	8.056	49.105	1.00	0.00
	ATOM	130	CA	ARG	17	-0.944	9.657	47.947	1.00	8.92
	ATOM	131	CB	ARG	17	-2.148	10.492	48.385	1.00	9.48
	ATOM	132	CG	ARG	17	-2.033	11.962	47.998	1.00	8.28
25	ATOM	133	CD	ARG	17	-3.228	12.766	48.448	1.00	8.69
	ATOM	134	NE	ARG	17	-4.417	12.388	47.701	1.00	8.47
	ATOM	135	HE	ARG	17	-4.400	11.503	47.308	1.00	0.00
	ATOM	136	CZ	ARG	17	-5.470	13.173	47.505	1.00	10.19
	ATOM	137	NH1	ARG	17	-5.499	14.402	48.002	1.00	10.59
30	ATOM	138	HH11	ARG	17	-4.717	14.750	48.520	1.00	0.00
	ATOM	139	HH12	ARG	17	-6.295	14.988	47.859	1.00	0.00
	ATOM	140	NH2	ARG	17	-6.490	12.734	46.789	1.00	8.14
	ATOM	141	HH21	ARG	17	-6.457	11.804	46.413	1.00	0.00
	ATOM	142	HH22	ARG	17	-7.292	13.305	46.629	1.00	0.00
35	ATOM	143	C	ARG	17	0.342	10.321	48.426	1.00	11.05
	ATOM	144	O	ARG	17	1.039	10.974	47.649	1.00	12.01
	ATOM	145	N	ALA	18	0.666	10.131	49.704	1.00	9.21
	ATOM	146	H	ALA	18	0.067	9.605	50.279	1.00	0.00
	ATOM	147	CA	ALA	18	1.872	10.708	50.286	1.00	11.20

	ATOM	148	CB	ALA	18	2.001	10.301	51.745	1.00	15.06
	ATOM	149	C	ALA	18	3.123	10.303	49.521	1.00	12.57
	ATOM	150	O	ALA	18	3.959	11.152	49.193	1.00	12.90
	ATOM	151	N	GLU	19	3.250	9.008	49.240	1.00	11.57
5	ATOM	152	H	GLU	19	2.542	8.381	49.517	1.00	0.00
	ATOM	153	CA	GLU	19	4.403	8.488	48.514	1.00	11.99
	ATOM	154	CB	GLU	19	4.364	6.960	48.465	1.00	13.36
	ATOM	155	CG	GLU	19	4.482	6.297	49.820	1.00	20.61
	ATOM	156	CD	GLU	19	4.358	4.790	49.742	1.00	21.71
10	ATOM	157	OE1	GLU	19	5.400	4.108	49.647	1.00	29.81
	ATOM	158	OE2	GLU	19	3.216	4.285	49.774	1.00	19.69
	ATOM	159	C	GLU	19	4.449	9.043	47.099	1.00	11.13
	ATOM	160	O	GLU	19	5.524	9.357	46.584	1.00	12.79
	ATOM	161	N	ALA	20	3.280	9.155	46.472	1.00	12.51
15	ATOM	162	H	ALA	20	2.463	8.875	46.939	1.00	0.00
	ATOM	163	CA	ALA	20	3.177	9.681	45.109	1.00	13.22
	ATOM	164	CB	ALA	20	1.730	9.596	44.616	1.00	10.29
	ATOM	165	C	ALA	20	3.679	11.127	45.052	1.00	11.20
	ATOM	166	O	ALA	20	4.466	11.494	44.175	1.00	11.31
20	ATOM	167	N	GLU	21	3.243	11.933	46.009	1.00	10.24
	ATOM	168	H	GLU	21	2.638	11.588	46.693	1.00	0.00
	ATOM	169	CA	GLU	21	3.652	13.328	46.071	1.00	10.86
	ATOM	170	CB	GLU	21	2.804	14.091	47.082	1.00	7.73
	ATOM	171	CG	GLU	21	1.349	14.202	46.656	1.00	8.58
25	ATOM	172	CD	GLU	21	0.488	15.002	47.625	1.00	10.14
	ATOM	173	OE1	GLU	21	-0.692	15.230	47.308	1.00	9.72
	ATOM	174	OE2	GLU	21	0.985	15.414	48.693	1.00	13.94
	ATOM	175	C	GLU	21	5.142	13.468	46.374	1.00	12.31
	ATOM	176	O	GLU	21	5.780	14.425	45.942	1.00	13.09
30	ATOM	177	N	GLU	22	5.706	12.487	47.073	1.00	13.22
	ATOM	178	H	GLU	22	5.162	11.739	47.388	1.00	0.00
	ATOM	179	CA	GLU	22	7.124	12.508	47.394	1.00	11.25
	ATOM	180	CB	GLU	22	7.454	11.396	48.389	1.00	16.27
	ATOM	181	CG	GLU	22	8.811	11.551	49.035	1.00	25.51
35	ATOM	182	CD	GLU	22	9.194	10.364	49.891	1.00	32.11
	ATOM	183	OE1	GLU	22	8.324	9.852	50.631	1.00	36.02
	ATOM	184	OE2	GLU	22	10.371	9.948	49.818	1.00	34.67
	ATOM	185	C	GLU	22	7.942	12.345	46.107	1.00	11.86
	ATOM	186	O	GLU	22	8.902	13.080	45.873	1.00	10.75

	ATOM	187	N	HIS	23	7.537	11.406	45.255	1.00	9.76
	ATOM	188	H	HIS	23	6.741	10.889	45.512	1.00	0.00
	ATOM	189	CA	HIS	23	8.226	11.162	43.987	1.00	9.26
	ATOM	190	CB	HIS	23	7.651	9.927	43.286	1.00	7.86
5	ATOM	191	CG	HIS	23	8.087	8.634	43.903	1.00	10.39
	ATOM	192	CD2	HIS	23	9.315	8.090	44.050	1.00	8.91
	ATOM	193	ND1	HIS	23	7.205	7.746	44.482	1.00	14.23
	ATOM	194	HD1	HIS	23	6.236	7.854	44.576	1.00	0.00
	ATOM	195	CE1	HIS	23	7.873	6.713	44.960	1.00	10.97
10	ATOM	196	NE2	HIS	23	9.156	6.898	44.711	1.00	13.67
	ATOM	197	HE2	HIS	23	9.898	6.306	44.998	1.00	0.00
	ATOM	198	C	HIS	23	8.156	12.361	43.045	1.00	10.69
	ATOM	199	O	HIS	23	9.148	12.708	42.394	1.00	10.64
	ATOM	200	N	LEU	24	6.986	12.992	42.978	1.00	10.63
15	ATOM	201	H	LEU	24	6.232	12.680	43.521	1.00	0.00
	ATOM	202	CA	LEU	24	6.792	14.159	42.117	1.00	10.53
	ATOM	203	CB	LEU	24	5.309	14.532	42.046	1.00	10.68
	ATOM	204	CG	LEU	24	4.393	13.515	41.350	1.00	11.63
	ATOM	205	CD1	LEU	24	2.935	13.881	41.539	1.00	9.03
20	ATOM	206	CD2	LEU	24	4.724	13.449	39.874	1.00	7.43
	ATOM	207	C	LEU	24	7.636	15.343	42.599	1.00	11.35
	ATOM	208	O	LEU	24	8.165	16.110	41.790	1.00	11.67
	ATOM	209	N	LYS	25	7.790	15.472	43.914	1.00	11.16
	ATOM	210	H	LYS	25	7.347	14.841	44.523	1.00	0.00
25	ATOM	211	CA	LYS	25	8.595	16.548	44.480	1.00	10.68
	ATOM	212	CB	LYS	25	8.465	16.587	46.001	1.00	9.16
	ATOM	213	CG	LYS	25	7.135	17.068	46.517	1.00	6.98
	ATOM	214	CD	LYS	25	7.109	16.971	48.018	1.00	8.43
	ATOM	215	CE	LYS	25	5.794	17.436	48.586	1.00	9.56
30	ATOM	216	NZ	LYS	25	5.858	17.440	50.075	1.00	9.88
	ATOM	217	HZ1	LYS	25	6.621	18.081	50.375	1.00	0.00
	ATOM	218	HZ2	LYS	25	6.068	16.480	50.403	1.00	0.00
	ATOM	219	HZ3	LYS	25	4.953	17.769	50.472	1.00	0.00
	ATOM	220	C	LYS	25	10.051	16.323	44.125	1.00	12.70
35	ATOM	221	O	LYS	25	10.728	17.226	43.634	1.00	15.29
	ATOM	222	N	LEU	26	10.518	15.096	44.334	1.00	14.74
	ATOM	223	H	LEU	26	9.913	14.405	44.690	1.00	0.00
	ATOM	224	CA	LEU	26	11.906	14.746	44.057	1.00	16.13
	ATOM	225	CB	LEU	26	12.231	13.357	44.618	1.00	13.92

	ATOM	226	CG	LEU	26	12.231	13.216	46.145	1.00	13.80
	ATOM	227	CD1	LEU	26	12.430	11.772	46.521	1.00	16.36
	ATOM	228	CD2	LEU	26	13.320	14.072	46.761	1.00	17.12
	ATOM	229	C	LEU	26	12.252	14.818	42.574	1.00	18.06
5	ATOM	230	O	LEU	26	13.427	14.852	42.207	1.00	19.38
	ATOM	231	N	ALA	27	11.226	14.853	41.730	1.00	19.46
	ATOM	232	H	ALA	27	10.312	14.818	42.076	1.00	0.00
	ATOM	233	CA	ALA	27	11.414	14.926	40.285	1.00	20.96
	ATOM	234	CB	ALA	27	10.309	14.154	39.576	1.00	19.82
10	ATOM	235	C	ALA	27	11.495	16.356	39.741	1.00	20.81
	ATOM	236	O	ALA	27	11.713	16.551	38.544	1.00	24.10
	ATOM	237	N	GLY	28	11.285	17.352	40.596	1.00	20.02
	ATOM	238	H	GLY	28	11.099	17.182	41.546	1.00	0.00
	ATOM	239	CA	GLY	28	11.369	18.723	40.132	1.00	19.49
15	ATOM	240	C	GLY	28	10.100	19.554	40.161	1.00	21.05
	ATOM	241	O	GLY	28	10.164	20.764	39.955	1.00	22.70
	ATOM	242	N	SEM	29	8.946	18.926	40.374	1.00	20.23
	ATOM	243	H	SEM	29	8.927	17.952	40.496	1.00	0.00
	ATOM	244	CA	SEM	29	7.669	19.650	40.438	1.00	21.17
20	ATOM	245	CB	SEM	29	7.641	20.595	41.645	1.00	24.34
	ATOM	246	CG	SEM	29	7.505	19.914	42.994	1.00	28.45
	ATOM	247	A	SEM	29	5.834	18.935	43.183	1.00	33.82
	ATOM	248	CE	SEM	29	4.660	20.332	43.772	1.00	30.42
	ATOM	249	C	SEM	29	7.311	20.438	39.177	1.00	19.69
25	ATOM	250	O	SEM	29	6.640	21.471	39.250	1.00	18.65
	ATOM	251	N	ALA	30	7.749	19.948	38.025	1.00	19.92
	ATOM	252	H	ALA	30	8.251	19.114	38.032	1.00	0.00
	ATOM	253	CA	ALA	30	7.459	20.612	36.760	1.00	20.38
	ATOM	254	CB	ALA	30	8.314	20.023	35.641	1.00	20.76
30	ATOM	255	C	ALA	30	5.985	20.454	36.428	1.00	21.88
	ATOM	256	O	ALA	30	5.346	19.494	36.857	1.00	22.02
	ATOM	257	N	ASP	31	5.434	21.423	35.705	1.00	21.51
	ATOM	258	H	ASP	31	5.990	22.173	35.411	1.00	0.00
	ATOM	259	CA	ASP	31	4.034	21.367	35.304	1.00	22.50
35	ATOM	260	CB	ASP	31	3.582	22.700	34.704	1.00	26.22
	ATOM	261	CG	ASP	31	3.559	23.818	35.723	1.00	32.04
	ATOM	262	OD1	ASP	31	2.465	24.354	35.985	1.00	38.46
	ATOM	263	OD2	ASP	31	4.632	24.163	36.265	1.00	39.17
	ATOM	264	C	ASP	31	3.897	20.263	34.271	1.00	18.87

	ATOM	265	O	ASP	31	4.762	20.106	33.407	1.00	18.52
	ATOM	266	N	GLY	32	2.826	19.488	34.376	1.00	17.28
	ATOM	267	H	GLY	32	2.174	19.611	35.099	1.00	0.00
	ATOM	268	CA	GLY	32	2.609	18.403	33.445	1.00	15.03
5	ATOM	269	C	GLY	32	3.263	17.108	33.890	1.00	15.03
	ATOM	270	O	GLY	32	3.047	16.073	33.263	1.00	18.44
	ATOM	271	N	LEU	33	4.079	17.159	34.942	1.00	15.47
	ATOM	272	H	LEU	33	4.234	18.007	35.398	1.00	0.00
	ATOM	273	CA	LEU	33	4.746	15.965	35.470	1.00	14.99
10	ATOM	274	CB	LEU	33	5.765	16.359	36.545	1.00	14.41
	ATOM	275	CG	LEU	33	6.585	15.272	37.248	1.00	15.28
	ATOM	276	CD1	LEU	33	7.603	14.664	36.297	1.00	14.45
	ATOM	277	CD2	LEU	33	7.278	15.869	38.461	1.00	12.37
	ATOM	278	C	LEU	33	3.648	15.093	36.078	1.00	13.99
15	ATOM	279	O	LEU	33	2.833	15.582	36.868	1.00	12.54
	ATOM	280	N	PHE	34	3.625	13.810	35.726	1.00	13.31
	ATOM	281	H	PHE	34	4.305	13.484	35.098	1.00	0.00
	ATOM	282	CA	PHE	34	2.581	12.918	36.224	1.00	13.12
	ATOM	283	CB	PHE	34	1.410	12.877	35.225	1.00	10.40
20	ATOM	284	CG	PHE	34	1.713	12.111	33.955	1.00	13.52
	ATOM	285	CD1	PHE	34	1.269	10.798	33.796	1.00	13.58
	ATOM	286	CD2	PHE	34	2.460	12.694	32.934	1.00	10.22
	ATOM	287	CE1	PHE	34	1.567	10.078	32.640	1.00	14.14
	ATOM	288	CE2	PHE	34	2.762	11.985	31.776	1.00	12.23
25	ATOM	289	CZ	PHE	34	2.314	10.671	31.628	1.00	13.01
	ATOM	290	C	PHE	34	3.050	11.494	36.462	1.00	11.75
	ATOM	291	O	PHE	34	4.097	11.083	35.967	1.00	12.17
	ATOM	292	N	LEU	35	2.240	10.738	37.197	1.00	11.21
	ATOM	293	H	LEU	35	1.413	11.119	37.565	1.00	0.00
30	ATOM	294	CA	LEU	35	2.522	9.336	37.470	1.00	8.87
	ATOM	295	CB	LEU	35	3.428	9.168	38.701	1.00	8.10
	ATOM	296	CG	LEU	35	2.980	9.520	40.123	1.00	8.50
	ATOM	297	CD1	LEU	35	2.063	8.438	40.681	1.00	9.19
	ATOM	298	CD2	LEU	35	4.209	9.637	41.002	1.00	6.81
35	ATOM	299	C	LEU	35	1.190	8.615	37.637	1.00	7.92
	ATOM	300	O	LEU	35	0.153	9.251	37.855	1.00	8.48
	ATOM	301	N	LEU	36	1.209	7.297	37.498	1.00	8.12
	ATOM	302	H	LEU	36	2.057	6.836	37.350	1.00	0.00
	ATOM	303	CA	LEU	36	0.000	6.502	37.626	1.00	8.05

	ATOM	304	CB	LEU	36	-0.258	5.734	36.327	1.00	9.30
	ATOM	305	CG	LEU	36	-1.676	5.210	36.089	1.00	15.30
	ATOM	306	CD1	LEU	36	-2.635	6.386	35.956	1.00	15.10
	ATOM	307	CD2	LEU	36	-1.716	4.348	34.832	1.00	17.89
5	ATOM	308	C	LEU	36	0.164	5.532	38.789	1.00	8.05
	ATOM	309	O	LEU	36	1.238	4.961	38.991	1.00	8.20
	ATOM	310	N	ARG	37	-0.887	5.380	39.581	1.00	8.30
	ATOM	311	H	ARG	37	-1.714	5.882	39.404	1.00	0.00
	ATOM	312	CA	ARG	37	-0.853	4.468	40.716	1.00	8.39
10	ATOM	313	CB	ARG	37	-0.583	5.229	42.015	1.00	6.96
	ATOM	314	CG	ARG	37	-1.508	6.396	42.282	1.00	6.89
	ATOM	315	CD	ARG	37	-0.974	7.196	43.451	1.00	10.99
	ATOM	316	NE	ARG	37	-1.722	8.428	43.678	1.00	8.74
	ATOM	317	HE	ARG	37	-1.529	9.196	43.101	1.00	0.00
15	ATOM	318	CZ	ARG	37	-2.647	8.577	44.617	1.00	10.85
	ATOM	319	NH1	ARG	37	-2.956	7.567	45.423	1.00	9.35
	ATOM	320	HH11	ARG	37	-2.500	6.681	45.337	1.00	0.00
	ATOM	321	HH12	ARG	37	-3.658	7.697	46.120	1.00	0.00
	ATOM	322	NH2	ARG	37	-3.236	9.751	44.775	1.00	8.78
20	ATOM	323	HH21	ARG	37	-2.988	10.517	44.184	1.00	0.00
	ATOM	324	HH22	ARG	37	-3.915	9.870	45.480	1.00	0.00
	ATOM	325	C	ARG	37	-2.166	3.706	40.783	1.00	6.82
	ATOM	326	O	ARG	37	-3.161	4.125	40.193	1.00	8.12
	ATOM	327	N	GLN	38	-2.150	2.547	41.432	1.00	8.06
25	ATOM	328	H	GLN	38	-1.324	2.268	41.866	1.00	0.00
	ATOM	329	CA	GLN	38	-3.353	1.735	41.549	1.00	9.21
	ATOM	330	CB	GLN	38	-2.996	0.311	41.974	1.00	13.08
	ATOM	331	CG	GLN	38	-4.203	-0.585	42.170	1.00	18.32
	ATOM	332	CD	GLN	38	-3.832	-1.990	42.590	1.00	18.70
30	ATOM	333	OE1	GLN	38	-2.998	-2.195	43.472	1.00	19.47
	ATOM	334	NE2	GLN	38	-4.463	-2.968	41.967	1.00	22.25
	ATOM	335	HE21	GLN	38	-5.116	-2.694	41.275	1.00	0.00
	ATOM	336	HE22	GLN	38	-4.267	-3.889	42.210	1.00	0.00
	ATOM	337	C	GLN	38	-4.293	2.359	42.565	1.00	10.19
35	ATOM	338	O	GLN	38	-3.848	2.856	43.594	1.00	12.74
	ATOM	339	N	CYS	39	-5.589	2.339	42.278	1.00	11.02
	ATOM	340	H	CYS	39	-5.895	1.887	41.464	1.00	0.00
	ATOM	341	CA	CYS	39	-6.569	2.909	43.194	1.00	12.42
	ATOM	342	CB	CYS	39	-7.918	3.079	42.496	1.00	9.94

	ATOM	343	SG	CYS	39	-9.205	3.852	43.504	1.00	12.92
	ATOM	344	C	CYS	39	-6.720	2.008	44.414	1.00	12.91
	ATOM	345	O	CYS	39	-6.736	0.782	44.291	1.00	13.19
	ATOM	346	N	LEU	40	-6.776	2.620	45.592	1.00	10.63
5	ATOM	347	H	LEU	40	-6.680	3.598	45.633	1.00	0.00
	ATOM	348	CA	LEU	40	-6.934	1.875	46.833	1.00	12.90
	ATOM	349	CB	LEU	40	-6.139	2.543	47.965	1.00	11.53
	ATOM	350	CG	LEU	40	-4.629	2.680	47.747	1.00	13.24
	ATOM	351	CD1	LEU	40	-4.020	3.500	48.863	1.00	12.45
10	ATOM	352	CD2	LEU	40	-3.969	1.317	47.657	1.00	12.54
	ATOM	353	C	LEU	40	-8.401	1.789	47.226	1.00	11.01
	ATOM	354	O	LEU	40	-8.748	1.127	48.201	1.00	12.23
	ATOM	355	N	ARG	41	-9.269	2.412	46.439	1.00	10.95
	ATOM	356	H	ARG	41	-8.957	2.869	45.631	1.00	0.00
15	ATOM	357	CA	ARG	41	-10.690	2.431	46.758	1.00	12.13
	ATOM	358	CB	ARG	41	-11.185	3.872	46.820	1.00	10.86
	ATOM	359	CG	ARG	41	-10.390	4.754	47.756	1.00	10.97
	ATOM	360	CD	ARG	41	-10.855	6.190	47.675	1.00	14.51
	ATOM	361	NE	ARG	41	-10.749	6.723	46.321	1.00	13.81
20	ATOM	362	HE	ARG	41	-9.859	6.768	45.924	1.00	0.00
	ATOM	363	CZ	ARG	41	-11.774	7.178	45.612	1.00	16.54
	ATOM	364	NH1	ARG	41	-12.996	7.177	46.121	1.00	18.89
	ATOM	365	HH11	ARG	41	-13.161	6.844	47.050	1.00	0.00
	ATOM	366	HH12	ARG	41	-13.760	7.526	45.579	1.00	0.00
25	ATOM	367	NH2	ARG	41	-11.582	7.602	44.373	1.00	21.20
	ATOM	368	HH21	ARG	41	-10.666	7.569	43.973	1.00	0.00
	ATOM	369	HH22	ARG	41	-12.355	7.948	43.842	1.00	0.00
	ATOM	370	C	ARG	41	-11.603	1.636	45.846	1.00	13.35
	ATOM	371	O	ARG	41	-12.672	1.203	46.274	1.00	14.24
30	ATOM	372	N	SER	42	-11.210	1.472	44.589	1.00	14.81
	ATOM	373	H	SER	42	-10.362	1.815	44.255	1.00	0.00
	ATOM	374	CA	SER	42	-12.032	0.738	43.637	1.00	15.10
	ATOM	375	CB	SER	42	-12.471	1.660	42.496	1.00	16.52
	ATOM	376	OG	SER	42	-11.357	2.145	41.768	1.00	17.93
35	ATOM	377	HG	SER	42	-11.715	2.592	40.982	1.00	0.00
	ATOM	378	C	SER	42	-11.298	-0.476	43.080	1.00	15.55
	ATOM	379	O	SER	42	-10.080	-0.598	43.220	1.00	16.20
	ATOM	380	N	LEU	43	-12.054	-1.394	42.490	1.00	15.52
	ATOM	381	H	LEU	43	-13.012	-1.234	42.420	1.00	0.00

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	ATOM	382	CA	LEU	43	-11.484	-2.600	41.904	1.00	16.45
	ATOM	383	CB	LEU	43	-12.504	-3.741	41.923	1.00	19.56
	ATOM	384	CG	LEU	43	-12.877	-4.324	43.285	1.00	21.50
	ATOM	385	CD1	LEU	43	-13.998	-5.333	43.111	1.00	22.99
5	ATOM	386	CD2	LEU	43	-11.661	-4.976	43.916	1.00	21.68
	ATOM	387	C	LEU	43	-11.064	-2.319	40.470	1.00	15.54
	ATOM	388	O	LEU	43	-11.874	-1.871	39.657	1.00	16.36
	ATOM	389	N	GLY	44	-9.786	-2.542	40.184	1.00	15.64
	ATOM	390	H	GLY	44	-9.170	-2.822	40.896	1.00	0.00
10	ATOM	391	CA	GLY	44	-9.267	-2.324	38.846	1.00	16.00
	ATOM	392	C	GLY	44	-9.138	-0.875	38.411	1.00	15.01
	ATOM	393	O	GLY	44	-8.965	-0.602	37.222	1.00	16.12
	ATOM	394	N	GLY	45	-9.188	0.048	39.368	1.00	12.81
	ATOM	395	H	GLY	45	-9.242	-0.234	40.305	1.00	0.00
15	ATOM	396	CA	GLY	45	-9.075	1.459	39.044	1.00	10.47
	ATOM	397	C	GLY	45	-7.666	1.983	39.226	1.00	9.12
	ATOM	398	O	GLY	45	-6.795	1.292	39.766	1.00	9.20
	ATOM	399	N	TYR	46	-7.443	3.220	38.800	1.00	9.58
	ATOM	400	H	TYR	46	-8.185	3.734	38.409	1.00	0.00
20	ATOM	401	CA	TYR	46	-6.137	3.859	38.914	1.00	10.00
	ATOM	402	CB	TYR	46	-5.426	3.889	37.548	1.00	10.79
	ATOM	403	CG	TYR	46	-5.110	2.528	36.977	1.00	12.05
	ATOM	404	CD1	TYR	46	-4.019	1.793	37.440	1.00	11.46
	ATOM	405	CE1	TYR	46	-3.758	0.514	36.960	1.00	10.52
25	ATOM	406	CD2	TYR	46	-5.931	1.952	36.010	1.00	13.57
	ATOM	407	CE2	TYR	46	-5.678	0.674	35.525	1.00	13.97
	ATOM	408	CZ	TYR	46	-4.592	-0.037	36.007	1.00	14.16
	ATOM	409	OH	TYR	46	-4.362	-1.311	35.554	1.00	15.79
	ATOM	410	HH	TYR	46	-5.246	-1.670	35.351	1.00	0.00
30	ATOM	411	C	TYR	46	-6.340	5.290	39.376	1.00	9.80
	ATOM	412	O	TYR	46	-7.472	5.747	39.525	1.00	9.96
	ATOM	413	N	VAL	47	-5.243	5.967	39.679	1.00	9.60
	ATOM	414	H	VAL	47	-4.355	5.549	39.641	1.00	0.00
	ATOM	415	CA	VAL	47	-5.298	7.365	40.057	1.00	9.96
35	ATOM	416	CB	VAL	47	-5.092	7.619	41.573	1.00	9.82
	ATOM	417	CG1	VAL	47	-5.205	9.113	41.861	1.00	7.41
	ATOM	418	CG2	VAL	47	-6.117	6.867	42.390	1.00	10.33
	ATOM	419	C	VAL	47	-4.180	8.045	39.286	1.00	8.75
	ATOM	420	O	VAL	47	-3.044	7.561	39.261	1.00	6.17

	ATOM	421	N	LEU	48	-4.536	9.117	38.590	1.00	9.67
	ATOM	422	H	LEU	48	-5.470	9.398	38.591	1.00	0.00
	ATOM	423	CA	LEU	48	-3.585	9.907	37.827	1.00	10.81
	ATOM	424	CB	LEU	48	-4.275	10.520	36.604	1.00	14.82
5	ATOM	425	CG	LEU	48	-3.499	10.808	35.312	1.00	18.26
	ATOM	426	CD1	LEU	48	-4.357	11.691	34.420	1.00	19.66
	ATOM	427	CD2	LEU	48	-2.178	11.482	35.582	1.00	16.76
	ATOM	428	C	LEU	48	-3.174	11.022	38.786	1.00	9.47
	ATOM	429	O	LEU	48	-4.020	11.754	39.302	1.00	9.86
10	ATOM	430	N	SER	49	-1.888	11.119	39.064	1.00	8.65
	ATOM	431	H	SER	49	-1.257	10.496	38.640	1.00	0.00
	ATOM	432	CA	SER	49	-1.386	12.145	39.956	1.00	12.04
	ATOM	433	CB	SER	49	-0.590	11.479	41.084	1.00	13.48
	ATOM	434	OG	SER	49	-0.103	12.428	42.009	1.00	30.10
15	ATOM	435	HG	SER	49	0.614	12.893	41.557	1.00	0.00
	ATOM	436	C	SER	49	-0.510	13.088	39.125	1.00	10.25
	ATOM	437	O	SER	49	0.481	12.655	38.537	1.00	11.37
	ATOM	438	N	LEU	50	-0.888	14.361	39.040	1.00	12.50
	ATOM	439	H	LEU	50	-1.689	14.672	39.504	1.00	0.00
20	ATOM	440	CA	LEU	50	-0.114	15.319	38.252	1.00	13.14
	ATOM	441	CB	LEU	50	-0.803	15.591	36.906	1.00	14.83
	ATOM	442	CG	LEU	50	-2.188	16.241	36.861	1.00	18.60
	ATOM	443	CD1	LEU	50	-2.066	17.749	36.713	1.00	18.66
	ATOM	444	CD2	LEU	50	-2.959	15.691	35.681	1.00	22.06
25	ATOM	445	C	LEU	50	0.181	16.629	38.973	1.00	14.34
	ATOM	446	O	LEU	50	-0.481	16.982	39.951	1.00	14.49
	ATOM	447	N	VAL	51	1.190	17.339	38.481	1.00	13.90
	ATOM	448	H	VAL	51	1.680	17.006	37.698	1.00	0.00
	ATOM	449	CA	VAL	51	1.591	18.615	39.052	1.00	14.39
30	ATOM	450	CB	VAL	51	3.124	18.688	39.277	1.00	13.58
	ATOM	451	CG1	VAL	51	3.512	20.051	39.833	1.00	12.21
	ATOM	452	CG2	VAL	51	3.581	17.592	40.218	1.00	12.91
	ATOM	453	C	VAL	51	1.218	19.757	38.111	1.00	16.09
	ATOM	454	O	VAL	51	1.329	19.637	36.890	1.00	17.31
35	ATOM	455	N	HIS	52	0.755	20.857	38.688	1.00	17.95
	ATOM	456	H	HIS	52	0.631	20.876	39.664	1.00	0.00
	ATOM	457	CA	HIS	52	0.417	22.050	37.930	1.00	19.66
	ATOM	458	CB	HIS	52	-0.950	21.947	37.264	1.00	21.46
	ATOM	459	CG	HIS	52	-1.278	23.126	36.400	1.00	25.94

	ATOM	460	CD2	HIS	52	-2.324	23.985	36.417	1.00	26.46
	ATOM	461	ND1	HIS	52	-0.447	23.555	35.385	1.00	27.09
	ATOM	462	HD1	HIS	52	0.379	23.112	35.092	1.00	0.00
	ATOM	463	CE1	HIS	52	-0.965	24.630	34.818	1.00	24.62
5	ATOM	464	NE2	HIS	52	-2.105	24.911	35.426	1.00	27.73
	ATOM	465	HE2	HIS	52	-2.713	25.644	35.178	1.00	0.00
	ATOM	466	C	HIS	52	0.429	23.217	38.899	1.00	21.92
	ATOM	467	O	HIS	52	-0.241	23.176	39.926	1.00	20.84
	ATOM	468	N	ASP	53	1.245	24.221	38.592	1.00	26.19
10	ATOM	469	H	ASP	53	1.857	24.140	37.845	1.00	0.00
	ATOM	470	CA	ASP	53	1.374	25.421	39.415	1.00	26.69
	ATOM	471	CB	ASP	53	0.043	26.185	39.499	1.00	30.60
	ATOM	472	CG	ASP	53	-0.369	26.803	38.176	1.00	37.06
	ATOM	473	OD1	ASP	53	0.465	26.855	37.246	1.00	41.34
15	ATOM	474	OD2	ASP	53	-1.537	27.243	38.070	1.00	39.93
	ATOM	475	C	ASP	53	1.859	25.075	40.811	1.00	25.96
	ATOM	476	O	ASP	53	1.337	25.589	41.802	1.00	27.13
	ATOM	477	N	VAL	54	2.844	24.181	40.876	1.00	24.42
	ATOM	478	H	VAL	54	3.192	23.818	40.037	1.00	0.00
20	ATOM	479	CA	VAL	54	3.441	23.735	42.136	1.00	25.36
	ATOM	480	CB	VAL	54	4.218	24.896	42.834	1.00	25.58
	ATOM	481	CG1	VAL	54	5.100	24.360	43.949	1.00	27.09
	ATOM	482	CG2	VAL	54	5.077	25.639	41.816	1.00	30.24
	ATOM	483	C	VAL	54	2.395	23.130	43.083	1.00	24.41
25	ATOM	484	O	VAL	54	2.551	23.140	44.310	1.00	24.03
	ATOM	485	N	ARG	55	1.338	22.576	42.500	1.00	22.42
	ATOM	486	H	ARG	55	1.250	22.563	41.527	1.00	0.00
	ATOM	487	CA	ARG	55	0.273	21.957	43.272	1.00	23.20
	ATOM	488	CB	ARG	55	-0.956	22.865	43.334	1.00	28.27
30	ATOM	489	CG	ARG	55	-0.807	23.981	44.356	1.00	39.63
	ATOM	490	CD	ARG	55	-2.051	24.848	44.467	1.00	48.23
	ATOM	491	NE	ARG	55	-1.954	25.777	45.595	1.00	56.45
	ATOM	492	HE	ARG	55	-2.462	25.560	46.404	1.00	0.00
	ATOM	493	CZ	ARG	55	-1.222	26.891	45.602	1.00	60.28
35	ATOM	494	NH1	ARG	55	-0.509	27.240	44.535	1.00	63.46
	ATOM	495	HH11	ARG	55	-0.514	26.661	43.716	1.00	0.00
	ATOM	496	HH12	ARG	55	0.028	28.083	44.550	1.00	0.00
	ATOM	497	NH2	ARG	55	-1.192	27.657	46.686	1.00	60.77
	ATOM	498	HH21	ARG	55	-1.725	27.400	47.491	1.00	0.00

	ATOM	499	HH22	ARG	55	-0.647	28.494	46.685	1.00	0.00
	ATOM	500	C	ARG	55	-0.084	20.600	42.694	1.00	18.98
	ATOM	501	O	ARG	55	0.024	20.377	41.488	1.00	18.12
	ATOM	502	N	PHE	56	-0.499	19.692	43.567	1.00	17.36
5	ATOM	503	H	PHE	56	-0.588	19.942	44.514	1.00	0.00
	ATOM	504	CA	PHE	56	-0.854	18.341	43.164	1.00	15.57
	ATOM	505	CB	PHE	56	-0.498	17.347	44.270	1.00	14.98
	ATOM	506	CG	PHE	56	0.950	17.344	44.634	1.00	12.04
	ATOM	507	CD1	PHE	56	1.371	17.844	45.862	1.00	11.96
10	ATOM	508	CD2	PHE	56	1.897	16.847	43.749	1.00	13.48
	ATOM	509	CE1	PHE	56	2.714	17.852	46.203	1.00	13.52
	ATOM	510	CE2	PHE	56	3.245	16.850	44.079	1.00	12.78
	ATOM	511	CZ	PHE	56	3.654	17.353	45.310	1.00	14.92
	ATOM	512	C	PHE	56	-2.320	18.183	42.824	1.00	14.57
15	ATOM	513	O	PHE	56	-3.192	18.802	43.439	1.00	16.84
	ATOM	514	N	HIS	57	-2.586	17.340	41.838	1.00	12.74
	ATOM	515	H	HIS	57	-1.838	16.904	41.364	1.00	0.00
	ATOM	516	CA	HIS	57	-3.942	17.049	41.412	1.00	13.90
	ATOM	517	CB	HIS	57	-4.248	17.741	40.080	1.00	17.35
20	ATOM	518	CG	HIS	57	-4.144	19.235	40.145	1.00	22.06
	ATOM	519	CD2	HIS	57	-3.097	20.066	39.924	1.00	21.97
	ATOM	520	ND1	HIS	57	-5.198	20.041	40.523	1.00	23.17
	ATOM	521	HD1	HIS	57	-6.107	19.754	40.750	1.00	0.00
	ATOM	522	CE1	HIS	57	-4.802	21.303	40.536	1.00	23.20
25	ATOM	523	NE2	HIS	57	-3.532	21.344	40.178	1.00	22.64
	ATOM	524	HE2	HIS	57	-2.966	22.151	40.144	1.00	0.00
	ATOM	525	C	HIS	57	-4.014	15.533	41.294	1.00	11.98
	ATOM	526	O	HIS	57	-3.099	14.901	40.765	1.00	11.55
	ATOM	527	N	HIS	58	-5.058	14.944	41.867	1.00	10.33
30	ATOM	528	H	HIS	58	-5.780	15.455	42.288	1.00	0.00
	ATOM	529	CA	HIS	58	-5.217	13.499	41.848	1.00	8.93
	ATOM	530	CB	HIS	58	-5.063	12.945	43.266	1.00	5.64
	ATOM	531	CG	HIS	58	-3.765	13.316	43.913	1.00	8.00
	ATOM	532	CD2	HIS	58	-3.449	14.312	44.772	1.00	5.61
35	ATOM	533	ND1	HIS	58	-2.591	12.636	43.667	1.00	6.85
	ATOM	534	HD1	HIS	58	-2.468	11.854	43.085	1.00	0.00
	ATOM	535	CE1	HIS	58	-1.609	13.197	44.349	1.00	6.57
	ATOM	536	NE2	HIS	58	-2.102	14.217	45.024	1.00	6.83
	ATOM	537	HE2	HIS	58	-1.588	14.836	45.576	1.00	0.00

	ATOM	538	C	HIS	58	-6.570	13.158	41.267	1.00	9.13
	ATOM	539	O	HIS	58	-7.603	13.507	41.831	1.00	12.23
	ATOM	540	N	PHE	59	-6.551	12.519	40.107	1.00	9.57
	ATOM	541	H	PHE	59	-5.709	12.287	39.679	1.00	0.00
5	ATOM	542	CA	PHE	59	-7.769	12.150	39.408	1.00	12.32
	ATOM	543	CB	PHE	59	-7.703	12.621	37.948	1.00	11.96
	ATOM	544	CG	PHE	59	-7.623	14.109	37.789	1.00	13.50
	ATOM	545	CD1	PHE	59	-6.397	14.762	37.851	1.00	12.51
	ATOM	546	CD2	PHE	59	-8.777	14.861	37.599	1.00	13.89
10	ATOM	547	CE1	PHE	59	-6.318	16.146	37.731	1.00	17.22
	ATOM	548	CE2	PHE	59	-8.713	16.248	37.478	1.00	17.22
	ATOM	549	CZ	PHE	59	-7.481	16.893	37.544	1.00	17.16
	ATOM	550	C	PHE	59	-8.021	10.650	39.427	1.00	13.06
	ATOM	551	O	PHE	59	-7.232	9.868	38.893	1.00	12.71
15	ATOM	552	N	PRO	60	-9.108	10.220	40.075	1.00	14.37
	ATOM	553	CD	PRO	60	-10.034	10.958	40.953	1.00	13.14
	ATOM	554	CA	PRO	60	-9.374	8.782	40.094	1.00	15.39
	ATOM	555	CB	PRO	60	-10.420	8.640	41.206	1.00	15.06
	ATOM	556	CG	PRO	60	-11.125	9.952	41.195	1.00	16.60
20	ATOM	557	C	PRO	60	-9.881	8.310	38.719	1.00	15.44
	ATOM	558	O	PRO	60	-10.659	9.000	38.051	1.00	16.09
	ATOM	559	N	ILE	61	-9.355	7.180	38.267	1.00	15.98
	ATOM	560	H	ILE	61	-8.723	6.742	38.838	1.00	0.00
	ATOM	561	CA	ILE	61	-9.724	6.582	36.986	1.00	15.23
25	ATOM	562	CB	ILE	61	-8.472	6.222	36.164	1.00	14.68
	ATOM	563	CG2	ILE	61	-8.868	5.536	34.856	1.00	15.39
	ATOM	564	CG1	ILE	61	-7.655	7.482	35.886	1.00	13.45
	ATOM	565	CD	ILE	61	-6.296	7.211	35.307	1.00	12.44
	ATOM	566	C	ILE	61	-10.497	5.309	37.308	1.00	17.07
30	ATOM	567	O	ILE	61	-9.978	4.413	37.984	1.00	16.51
	ATOM	568	N	GLU	62	-11.739	5.240	36.845	1.00	19.22
	ATOM	569	H	GLU	62	-12.099	5.968	36.290	1.00	0.00
	ATOM	570	CA	GLU	62	-12.582	4.084	37.112	1.00	23.18
	ATOM	571	CB	GLU	62	-13.981	4.541	37.538	1.00	30.15
35	ATOM	572	CG	GLU	62	-14.906	3.407	37.975	1.00	39.45
	ATOM	573	CD	GLU	62	-16.305	3.882	38.332	1.00	44.10
	ATOM	574	OE1	GLU	62	-16.458	4.548	39.381	1.00	48.25
	ATOM	575	OE2	GLU	62	-17.251	3.579	37.569	1.00	44.87
	ATOM	576	C	GLU	62	-12.688	3.162	35.910	1.00	23.10

	ATOM	577	O	GLU	62	-12.709	3.619	34.766	1.00	21.60
	ATOM	578	N	ARG	63	-12.721	1.862	36.180	1.00	24.50
	ATOM	579	H	ARG	63	-12.684	1.558	37.114	1.00	0.00
	ATOM	580	CA	ARG	63	-12.848	0.861	35.135	1.00	28.70
5	ATOM	581	CB	ARG	63	-12.152	-0.437	35.547	1.00	31.42
	ATOM	582	CG	ARG	63	-12.177	-1.521	34.477	1.00	36.91
	ATOM	583	CD	ARG	63	-11.909	-2.885	35.079	1.00	40.57
	ATOM	584	NE	ARG	63	-12.927	-3.223	36.072	1.00	46.47
	ATOM	585	HE	ARG	63	-13.820	-2.825	35.972	1.00	0.00
10	ATOM	586	CZ	ARG	63	-12.730	-4.030	37.111	1.00	47.98
	ATOM	587	NH1	ARG	63	-11.546	-4.600	37.306	1.00	48.36
	ATOM	588	HH11	ARG	63	-10.792	-4.431	36.671	1.00	0.00
	ATOM	589	HH12	ARG	63	-11.407	-5.204	38.089	1.00	0.00
	ATOM	590	NH2	ARG	63	-13.714	-4.247	37.975	1.00	47.23
15	ATOM	591	HH21	ARG	63	-14.605	-3.810	37.847	1.00	0.00
	ATOM	592	HH22	ARG	63	-13.559	-4.855	38.754	1.00	0.00
	ATOM	593	C	ARG	63	-14.332	0.590	34.944	1.00	28.52
	ATOM	594	O	ARG	63	-15.002	0.123	35.867	1.00	29.96
	ATOM	595	N	GLN	64	-14.851	0.931	33.771	1.00	29.71
20	ATOM	596	H	GLN	64	-14.266	1.330	33.103	1.00	0.00
	ATOM	597	CA	GLN	64	-16.257	0.706	33.464	1.00	33.43
	ATOM	598	CB	GLN	64	-16.672	1.454	32.196	1.00	36.64
	ATOM	599	CG	GLN	64	-17.287	2.819	32.432	1.00	39.67
	ATOM	600	CD	GLN	64	-16.263	3.870	32.775	1.00	40.97
25	ATOM	601	OE1	GLN	64	-16.145	4.290	33.929	1.00	42.60
	ATOM	602	NE2	GLN	64	-15.511	4.307	31.774	1.00	41.46
	ATOM	603	HE21	GLN	64	-15.640	3.928	30.878	1.00	0.00
	ATOM	604	HE22	GLN	64	-14.861	4.992	32.008	1.00	0.00
	ATOM	605	C	GLN	64	-16.545	-0.778	33.279	1.00	35.62
30	ATOM	606	O	GLN	64	-15.648	-1.570	32.982	1.00	35.48
	ATOM	607	N	LEU	65	-17.816	-1.133	33.412	1.00	38.38
	ATOM	608	H	LEU	65	-18.450	-0.436	33.661	1.00	0.00
	ATOM	609	CA	LEU	65	-18.268	-2.510	33.264	1.00	42.81
	ATOM	610	CB	LEU	65	-19.792	-2.583	33.418	1.00	47.54
35	ATOM	611	CG	LEU	65	-20.691	-1.926	32.359	1.00	51.72
	ATOM	612	CD1	LEU	65	-22.145	-2.279	32.653	1.00	54.58
	ATOM	613	CD2	LEU	65	-20.501	-0.410	32.318	1.00	51.28
	ATOM	614	C	LEU	65	-17.849	-3.137	31.934	1.00	43.23
	ATOM	615	O	LEU	65	-17.547	-4.327	31.873	1.00	44.38

	ATOM	616	N	ASN	66	-17.801	-2.329	30.879	1.00	42.92
	ATOM	617	H	ASN	66	-18.004	-1.382	30.987	1.00	0.00
	ATOM	618	CA	ASN	66	-17.421	-2.825	29.559	1.00	42.31
	ATOM	619	CB	ASN	66	-18.052	-1.973	28.456	1.00	45.73
5	ATOM	620	CG	ASN	66	-17.404	-0.612	28.327	1.00	48.82
	ATOM	621	OD1	ASN	66	-16.998	-0.009	29.321	1.00	52.33
	ATOM	622	ND2	ASN	66	-17.292	-0.124	27.100	1.00	52.00
	ATOM	623	HD21	ASN	66	-17.611	-0.677	26.357	1.00	0.00
	ATOM	624	HD22	ASN	66	-16.904	0.765	26.986	1.00	0.00
10	ATOM	625	C	ASN	66	-15.909	-2.916	29.346	1.00	41.37
	ATOM	626	O	ASN	66	-15.444	-3.072	28.215	1.00	42.54
	ATOM	627	N	GLY	67	-15.144	-2.788	30.425	1.00	39.06
	ATOM	628	H	GLY	67	-15.525	-2.652	31.316	1.00	0.00
	ATOM	629	CA	GLY	67	-13.700	-2.884	30.321	1.00	35.20
15	ATOM	630	C	GLY	67	-12.924	-1.642	29.927	1.00	31.27
	ATOM	631	O	GLY	67	-11.718	-1.728	29.706	1.00	32.16
	ATOM	632	N	THR	68	-13.594	-0.501	29.801	1.00	28.74
	ATOM	633	H	THR	68	-14.552	-0.492	29.964	1.00	0.00
	ATOM	634	CA	THR	68	-12.897	0.732	29.450	1.00	26.00
20	ATOM	635	CB	THR	68	-13.738	1.639	28.531	1.00	26.73
	ATOM	636	OG1	THR	68	-14.997	1.940	29.149	1.00	28.49
	ATOM	637	HG1	THR	68	-15.528	1.140	29.220	1.00	0.00
	ATOM	638	CG2	THR	68	-13.962	0.970	27.186	1.00	27.12
	ATOM	639	C	THR	68	-12.536	1.480	30.731	1.00	24.27
25	ATOM	640	O	THR	68	-12.941	1.075	31.821	1.00	23.18
	ATOM	641	N	TYR	69	-11.769	2.558	30.600	1.00	22.13
	ATOM	642	H	TYR	69	-11.499	2.867	29.726	1.00	0.00
	ATOM	643	CA	TYR	69	-11.345	3.355	31.744	1.00	20.20
	ATOM	644	CB	TYR	69	-9.845	3.184	31.984	1.00	17.55
30	ATOM	645	CG	TYR	69	-9.452	1.783	32.360	1.00	15.74
	ATOM	646	CD1	TYR	69	-9.286	0.801	31.386	1.00	16.67
	ATOM	647	CE1	TYR	69	-8.936	-0.501	31.731	1.00	18.61
	ATOM	648	CD2	TYR	69	-9.256	1.433	33.693	1.00	15.77
	ATOM	649	CE2	TYR	69	-8.905	0.138	34.050	1.00	17.24
35	ATOM	650	CZ	TYR	69	-8.745	-0.824	33.065	1.00	18.54
	ATOM	651	OH	TYR	69	-8.389	-2.102	33.417	1.00	19.33
	ATOM	652	HH	TYR	69	-8.332	-2.618	32.605	1.00	0.00
	ATOM	653	C	TYR	69	-11.646	4.818	31.489	1.00	20.07
	ATOM	654	O	TYR	69	-11.509	5.296	30.360	1.00	19.19

	ATOM	655	N	ALA	70	-12.038	5.538	32.534	1.00	20.74
	ATOM	656	H	ALA	70	-12.144	5.122	33.421	1.00	0.00
	ATOM	657	CA	ALA	70	-12.346	6.951	32.380	1.00	22.43
	ATOM	658	CB	ALA	70	-13.703	7.123	31.701	1.00	20.46
5	ATOM	659	C	ALA	70	-12.333	7.727	33.683	1.00	23.77
	ATOM	660	O	ALA	70	-12.569	7.169	34.760	1.00	23.69
	ATOM	661	N	ILE	71	-11.975	9.001	33.573	1.00	24.06
	ATOM	662	H	ILE	71	-11.708	9.364	32.704	1.00	0.00
	ATOM	663	CA	ILE	71	-11.982	9.909	34.704	1.00	24.49
10	ATOM	664	CB	ILE	71	-11.079	11.134	34.450	1.00	23.76
	ATOM	665	CG2	ILE	71	-11.206	12.132	35.593	1.00	23.11
	ATOM	666	CG1	ILE	71	-9.623	10.691	34.285	1.00	22.21
	ATOM	667	CD	ILE	71	-8.669	11.832	34.009	1.00	18.51
	ATOM	668	C	ILE	71	-13.445	10.346	34.719	1.00	26.14
15	ATOM	669	O	ILE	71	-14.057	10.481	33.659	1.00	23.83
	ATOM	670	N	ALA	72	-14.016	10.525	35.904	1.00	29.31
	ATOM	671	H	ALA	72	-13.481	10.391	36.712	1.00	0.00
	ATOM	672	CA	ALA	72	-15.417	10.922	36.026	1.00	33.39
	ATOM	673	CB	ALA	72	-15.759	11.228	37.480	1.00	33.93
20	ATOM	674	C	ALA	72	-15.764	12.113	35.138	1.00	34.98
	ATOM	675	O	ALA	72	-15.242	13.212	35.324	1.00	34.89
	ATOM	676	N	GLY	73	-16.628	11.874	34.158	1.00	36.34
	ATOM	677	H	GLY	73	-16.960	10.963	34.030	1.00	0.00
	ATOM	678	CA	GLY	73	-17.044	12.932	33.254	1.00	36.52
25	ATOM	679	C	GLY	73	-16.171	13.105	32.025	1.00	35.63
	ATOM	680	O	GLY	73	-16.375	14.032	31.239	1.00	37.15
	ATOM	681	N	GLY	74	-15.201	12.215	31.852	1.00	33.13
	ATOM	682	H	GLY	74	-15.099	11.459	32.459	1.00	0.00
	ATOM	683	CA	GLY	74	-14.320	12.301	30.706	1.00	32.37
30	ATOM	684	C	GLY	74	-14.561	11.132	29.782	1.00	34.04
	ATOM	685	O	GLY	74	-15.276	10.191	30.131	1.00	34.17
	ATOM	686	N	LYS	75	-13.954	11.178	28.604	1.00	34.83
	ATOM	687	H	LYS	75	-13.391	11.953	28.407	1.00	0.00
	ATOM	688	CA	LYS	75	-14.112	10.109	27.630	1.00	35.85
35	ATOM	689	CB	LYS	75	-13.575	10.550	26.266	1.00	40.25
	ATOM	690	CG	LYS	75	-14.604	11.333	25.454	1.00	48.14
	ATOM	691	CD	LYS	75	-13.992	12.101	24.290	1.00	53.33
	ATOM	692	CE	LYS	75	-13.261	13.349	24.773	1.00	57.38
	ATOM	693	NZ	LYS	75	-12.808	14.218	23.647	1.00	59.74

	ATOM	694	HZ1	LYS	75	-13.632	14.560	23.114	1.00	0.00
	ATOM	695	HZ2	LYS	75	-12.192	13.677	23.006	1.00	0.00
	ATOM	696	HZ3	LYS	75	-12.282	15.027	24.027	1.00	0.00
	ATOM	697	C	LYS	75	-13.461	8.807	28.082	1.00	34.24
5	ATOM	698	O	LYS	75	-12.416	8.812	28.741	1.00	33.16
	ATOM	699	N	ALA	76	-14.114	7.695	27.767	1.00	31.87
	ATOM	700	H	ALA	76	-14.954	7.758	27.270	1.00	0.00
	ATOM	701	CA	ALA	76	-13.606	6.380	28.126	1.00	31.22
	ATOM	702	CB	ALA	76	-14.719	5.342	28.061	1.00	30.23
10	ATOM	703	C	ALA	76	-12.479	6.005	27.179	1.00	28.77
	ATOM	704	O	ALA	76	-12.464	6.419	26.022	1.00	30.26
	ATOM	705	N	HIS	77	-11.525	5.237	27.683	1.00	27.21
	ATOM	706	H	HIS	77	-11.587	4.898	28.592	1.00	0.00
	ATOM	707	CA	HIS	77	-10.389	4.800	26.893	1.00	27.71
15	ATOM	708	CB	HIS	77	-9.130	5.559	27.313	1.00	27.15
	ATOM	709	CG	HIS	77	-9.230	7.040	27.123	1.00	28.63
	ATOM	710	CD2	HIS	77	-8.946	7.826	26.057	1.00	27.68
	ATOM	711	ND1	HIS	77	-9.699	7.888	28.105	1.00	29.85
	ATOM	712	HD1	HIS	77	-10.027	7.624	28.994	1.00	0.00
20	ATOM	713	CE1	HIS	77	-9.699	9.130	27.652	1.00	28.48
	ATOM	714	NE2	HIS	77	-9.248	9.118	26.412	1.00	29.23
	ATOM	715	HE2	HIS	77	-9.158	9.891	25.818	1.00	0.00
	ATOM	716	C	HIS	77	-10.236	3.302	27.118	1.00	28.88
	ATOM	717	O	HIS	77	-10.611	2.786	28.169	1.00	27.46
25	ATOM	718	N	CYS	78	-9.703	2.599	26.128	1.00	29.61
	ATOM	719	H	CYS	78	-9.406	3.050	25.306	1.00	0.00
	ATOM	720	CA	CYS	78	-9.542	1.153	26.224	1.00	30.03
	ATOM	721	CB	CYS	78	-9.278	0.566	24.841	1.00	34.14
	ATOM	722	SG	CYS	78	-8.119	1.534	23.883	1.00	44.93
30	ATOM	723	C	CYS	78	-8.489	0.668	27.211	1.00	25.84
	ATOM	724	O	CYS	78	-8.370	-0.530	27.443	1.00	26.98
	ATOM	725	N	GLY	79	-7.733	1.590	27.797	1.00	23.67
	ATOM	726	H	GLY	79	-7.837	2.542	27.613	1.00	0.00
	ATOM	727	CA	GLY	79	-6.714	1.202	28.754	1.00	18.52
35	ATOM	728	C	GLY	79	-6.019	2.397	29.371	1.00	18.97
	ATOM	729	O	GLY	79	-6.128	3.513	28.854	1.00	18.14
	ATOM	730	N	PRO	80	-5.281	2.194	30.473	1.00	18.06
	ATOM	731	CD	PRO	80	-5.090	0.904	31.157	1.00	18.29
	ATOM	732	CA	PRO	80	-4.559	3.264	31.165	1.00	17.93

	ATOM	733	CB	PRO	80	-3.931	2.536	32.357	1.00	20.63
	ATOM	734	CG	PRO	80	-3.791	1.121	31.873	1.00	19.63
	ATOM	735	C	PRO	80	-3.510	3.963	30.289	1.00	17.24
	ATOM	736	O	PRO	80	-3.408	5.190	30.300	1.00	14.92
5	ATOM	737	N	ALA	81	-2.757	3.192	29.510	1.00	15.32
	ATOM	738	H	ALA	81	-2.864	2.214	29.533	1.00	0.00
	ATOM	739	CA	ALA	81	-1.742	3.776	28.635	1.00	15.99
	ATOM	740	CB	ALA	81	-0.945	2.682	27.941	1.00	15.92
	ATOM	741	C	ALA	81	-2.367	4.713	27.600	1.00	16.17
10	ATOM	742	O	ALA	81	-1.862	5.810	27.363	1.00	15.48
	ATOM	743	N	GLU	82	-3.481	4.284	27.009	1.00	18.46
	ATOM	744	H	GLU	82	-3.847	3.436	27.305	1.00	0.00
	ATOM	745	CA	GLU	82	-4.188	5.066	25.994	1.00	18.23
	ATOM	746	CB	GLU	82	-5.298	4.238	25.334	1.00	20.10
15	ATOM	747	CG	GLU	82	-4.808	3.159	24.372	1.00	25.98
	ATOM	748	CD	GLU	82	-4.489	1.824	25.043	1.00	30.34
	ATOM	749	OE1	GLU	82	-4.351	0.817	24.317	1.00	35.16
	ATOM	750	OE2	GLU	82	-4.382	1.763	26.284	1.00	30.98
	ATOM	751	C	GLU	82	-4.780	6.333	26.591	1.00	17.53
20	ATOM	752	O	GLU	82	-4.855	7.368	25.928	1.00	15.66
	ATOM	753	N	LEU	83	-5.199	6.244	27.846	1.00	16.88
	ATOM	754	H	LEU	83	-5.136	5.386	28.316	1.00	0.00
	ATOM	755	CA	LEU	83	-5.769	7.383	28.548	1.00	17.11
	ATOM	756	CB	LEU	83	-6.359	6.929	29.888	1.00	17.19
25	ATOM	757	CG	LEU	83	-6.973	7.966	30.825	1.00	16.72
	ATOM	758	CD1	LEU	83	-8.124	7.338	31.597	1.00	16.47
	ATOM	759	CD2	LEU	83	-5.907	8.526	31.766	1.00	15.85
	ATOM	760	C	LEU	83	-4.694	8.454	28.742	1.00	17.05
	ATOM	761	O	LEU	83	-4.927	9.632	28.462	1.00	17.29
30	ATOM	762	N	CYS	84	-3.506	8.039	29.167	1.00	16.35
	ATOM	763	H	CYS	84	-3.372	7.082	29.354	1.00	0.00
	ATOM	764	CA	CYS	84	-2.412	8.979	29.377	1.00	17.56
	ATOM	765	CB	CYS	84	-1.265	8.308	30.129	1.00	16.45
	ATOM	766	SG	CYS	84	-1.663	7.902	31.846	1.00	14.67
35	ATOM	767	C	CYS	84	-1.925	9.578	28.060	1.00	20.60
	ATOM	768	O	CYS	84	-1.586	10.761	27.999	1.00	20.51
	ATOM	769	N	GLU	85	-1.911	8.766	27.005	1.00	22.93
	ATOM	770	H	GLU	85	-2.190	7.833	27.119	1.00	0.00
	ATOM	771	CA	GLU	85	-1.486	9.218	25.680	1.00	23.75

	ATOM	772	CB	GLU	85	-1.420	8.034	24.703	1.00	27.58
	ATOM	773	CG	GLU	85	-0.364	6.990	25.079	1.00	36.56
	ATOM	774	CD	GLU	85	-0.285	5.806	24.115	1.00	40.46
	ATOM	775	OE1	GLU	85	-1.165	4.919	24.169	1.00	38.44
5	ATOM	776	OE2	GLU	85	0.681	5.751	23.319	1.00	46.15
	ATOM	777	C	GLU	85	-2.439	10.298	25.164	1.00	23.52
	ATOM	778	O	GLU	85	-2.002	11.304	24.602	1.00	23.99
	ATOM	779	N	PHE	86	-3.735	10.109	25.404	1.00	23.07
	ATOM	780	H	PHE	86	-4.026	9.296	25.868	1.00	0.00
10	ATOM	781	CA	PHE	86	-4.758	11.063	24.981	1.00	22.06
	ATOM	782	CB	PHE	86	-6.158	10.499	25.245	1.00	23.30
	ATOM	783	CG	PHE	86	-7.265	11.504	25.064	1.00	25.88
	ATOM	784	CD1	PHE	86	-7.693	11.867	23.795	1.00	28.15
	ATOM	785	CD2	PHE	86	-7.874	12.093	26.169	1.00	27.77
15	ATOM	786	CE1	PHE	86	-8.713	12.803	23.628	1.00	30.93
	ATOM	787	CE2	PHE	86	-8.892	13.029	26.015	1.00	27.23
	ATOM	788	CZ	PHE	86	-9.314	13.385	24.742	1.00	30.08
	ATOM	789	C	PHE	86	-4.609	12.408	25.679	1.00	22.18
	ATOM	790	O	PHE	86	-4.657	13.457	25.032	1.00	22.09
20	ATOM	791	N	TYR	87	-4.438	12.378	26.998	1.00	20.74
	ATOM	792	H	TYR	87	-4.421	11.516	27.464	1.00	0.00
	ATOM	793	CA	TYR	87	-4.291	13.604	27.776	1.00	20.26
	ATOM	794	CB	TYR	87	-4.562	13.340	29.250	1.00	17.65
	ATOM	795	CG	TYR	87	-6.021	13.088	29.531	1.00	19.72
25	ATOM	796	CD1	TYR	87	-6.455	11.844	29.967	1.00	20.21
	ATOM	797	CE1	TYR	87	-7.798	11.603	30.242	1.00	25.37
	ATOM	798	CD2	TYR	87	-6.970	14.099	29.371	1.00	19.83
	ATOM	799	CE2	TYR	87	-8.320	13.873	29.644	1.00	21.99
	ATOM	800	CZ	TYR	87	-8.727	12.618	30.081	1.00	25.65
30	ATOM	801	OH	TYR	87	-10.052	12.356	30.364	1.00	25.64
	ATOM	802	HH	TYR	87	-10.057	11.542	30.886	1.00	0.00
	ATOM	803	C	TYR	87	-2.967	14.337	27.578	1.00	20.79
	ATOM	804	O	TYR	87	-2.795	15.458	28.061	1.00	20.79
	ATOM	805	N	SER	88	-2.026	13.691	26.895	1.00	24.94
35	ATOM	806	H	SER	88	-2.190	12.769	26.608	1.00	0.00
	ATOM	807	CA	SER	88	-0.737	14.305	26.584	1.00	28.11
	ATOM	808	CB	SER	88	0.268	13.249	26.112	1.00	27.90
	ATOM	809	OG	SER	88	0.565	12.303	27.124	1.00	35.96
	ATOM	810	HG	SER	88	-0.251	11.986	27.522	1.00	0.00

	ATOM	811	C	SER	88	-0.989	15.288	25.443	1.00	29.72
	ATOM	812	O	SER	88	-0.360	16.344	25.361	1.00	30.51
	ATOM	813	N	ARG	89	-1.917	14.924	24.563	1.00	31.17
	ATOM	814	H	ARG	89	-2.399	14.082	24.692	1.00	0.00
5	ATOM	815	CA	ARG	89	-2.265	15.750	23.418	1.00	35.74
	ATOM	816	CB	ARG	89	-2.712	14.874	22.243	1.00	40.10
	ATOM	817	CG	ARG	89	-1.582	14.360	21.356	1.00	47.31
	ATOM	818	CD	ARG	89	-0.637	13.443	22.108	1.00	51.57
	ATOM	819	NE	ARG	89	0.489	13.018	21.281	1.00	54.95
10	ATOM	820	HE	ARG	89	0.313	12.782	20.344	1.00	0.00
	ATOM	821	CZ	ARG	89	1.742	12.918	21.719	1.00	56.98
	ATOM	822	NH1	ARG	89	2.039	13.215	22.980	1.00	56.68
	ATOM	823	HH11	ARG	89	1.325	13.519	23.611	1.00	0.00
	ATOM	824	HH12	ARG	89	2.982	13.141	23.303	1.00	0.00
15	ATOM	825	NH2	ARG	89	2.700	12.511	20.897	1.00	57.57
	ATOM	826	HH21	ARG	89	2.477	12.279	19.950	1.00	0.00
	ATOM	827	HH22	ARG	89	3.642	12.430	21.228	1.00	0.00
	ATOM	828	C	ARG	89	-3.352	16.762	23.734	1.00	35.85
	ATOM	829	O	ARG	89	-3.263	17.924	23.334	1.00	36.15
20	ATOM	830	N	ASP	90	-4.375	16.327	24.457	1.00	37.16
	ATOM	831	H	ASP	90	-4.418	15.403	24.786	1.00	0.00
	ATOM	832	CA	ASP	90	-5.484	17.206	24.793	1.00	38.14
	ATOM	833	CB	ASP	90	-6.696	16.820	23.935	1.00	41.72
	ATOM	834	CG	ASP	90	-7.849	17.796	24.064	1.00	45.64
25	ATOM	835	OD1	ASP	90	-9.005	17.364	23.872	1.00	49.81
	ATOM	836	OD2	ASP	90	-7.608	18.992	24.342	1.00	47.83
	ATOM	837	C	ASP	90	-5.841	17.147	26.278	1.00	35.95
	ATOM	838	O	ASP	90	-6.216	16.094	26.786	1.00	35.57
	ATOM	839	N	PRO	91	-5.724	18.285	26.992	1.00	35.06
30	ATOM	840	CD	PRO	91	-5.220	19.578	26.497	1.00	34.31
	ATOM	841	CA	PRO	91	-6.040	18.368	28.424	1.00	34.83
	ATOM	842	CB	PRO	91	-5.934	19.865	28.705	1.00	33.84
	ATOM	843	CG	PRO	91	-4.858	20.296	27.778	1.00	35.60
	ATOM	844	C	PRO	91	-7.453	17.855	28.705	1.00	34.95
35	ATOM	845	O	PRO	91	-7.685	17.165	29.695	1.00	34.91
	ATOM	846	N	ASP	92	-8.393	18.245	27.844	1.00	34.68
	ATOM	847	H	ASP	92	-8.121	18.822	27.107	1.00	0.00
	ATOM	848	CA	ASP	92	-9.796	17.837	27.934	1.00	34.83
	ATOM	849	CB	ASP	92	-9.980	16.465	27.261	1.00	38.56

	ATOM	850	CG	ASP	92	-11.441	16.132	26.973	1.00	43.08
	ATOM	851	OD1	ASP	92	-11.864	14.990	27.264	1.00	46.42
	ATOM	852	OD2	ASP	92	-12.165	17.008	26.452	1.00	46.09
	ATOM	853	C	ASP	92	-10.380	17.841	29.358	1.00	33.28
5	ATOM	854	O	ASP	92	-11.021	16.879	29.789	1.00	32.13
	ATOM	855	N	GLY	93	-10.165	18.939	30.078	1.00	32.19
	ATOM	856	H	GLY	93	-9.648	19.684	29.719	1.00	0.00
	ATOM	857	CA	GLY	93	-10.691	19.042	31.428	1.00	30.80
	ATOM	858	C	GLY	93	-9.647	19.125	32.523	1.00	28.16
10	ATOM	859	O	GLY	93	-9.932	19.620	33.614	1.00	29.26
	ATOM	860	N	LEU	94	-8.456	18.600	32.262	1.00	25.58
	ATOM	861	H	LEU	94	-8.292	18.164	31.399	1.00	0.00
	ATOM	862	CA	LEU	94	-7.380	18.642	33.244	1.00	25.19
	ATOM	863	CB	LEU	94	-6.266	17.654	32.867	1.00	23.59
15	ATOM	864	CG	LEU	94	-6.578	16.165	32.692	1.00	21.25
	ATOM	865	CD1	LEU	94	-5.314	15.463	32.246	1.00	20.19
	ATOM	866	CD2	LEU	94	-7.097	15.552	33.978	1.00	20.15
	ATOM	867	C	LEU	94	-6.813	20.064	33.290	1.00	27.14
	ATOM	868	O	LEU	94	-6.956	20.826	32.329	1.00	26.74
20	ATOM	869	N	PRO	95	-6.160	20.439	34.407	1.00	27.36
	ATOM	870	CD	PRO	95	-5.991	19.647	35.637	1.00	27.79
	ATOM	871	CA	PRO	95	-5.571	21.774	34.568	1.00	27.68
	ATOM	872	CB	PRO	95	-5.025	21.736	35.999	1.00	28.71
	ATOM	873	CG	PRO	95	-4.772	20.274	36.244	1.00	28.16
25	ATOM	874	C	PRO	95	-4.475	22.088	33.544	1.00	27.92
	ATOM	875	O	PRO	95	-4.074	23.245	33.386	1.00	28.39
	ATOM	876	N	CYS	96	-3.953	21.041	32.912	1.00	28.28
	ATOM	877	H	CYS	96	-4.241	20.128	33.129	1.00	0.00
	ATOM	878	CA	CYS	96	-2.917	21.145	31.884	1.00	27.50
30	ATOM	879	CB	CYS	96	-1.596	21.666	32.467	1.00	27.76
	ATOM	880	SG	CYS	96	-0.775	20.589	33.668	1.00	30.21
	ATOM	881	C	CYS	96	-2.721	19.754	31.295	1.00	27.05
	ATOM	882	O	CYS	96	-3.133	18.762	31.899	1.00	28.24
	ATOM	883	N	ASN	97	-2.137	19.678	30.106	1.00	24.88
35	ATOM	884	H	ASN	97	-1.807	20.482	29.650	1.00	0.00
	ATOM	885	CA	ASN	97	-1.903	18.386	29.473	1.00	24.53
	ATOM	886	CB	ASN	97	-1.602	18.556	27.980	1.00	26.26
	ATOM	887	CG	ASN	97	-0.321	19.321	27.727	1.00	27.29
	ATOM	888	OD1	ASN	97	-0.142	20.430	28.230	1.00	33.19

	ATOM	889	ND2	ASN	97	0.577	18.737	26.950	1.00	29.41
	ATOM	890	HD21	ASN	97	0.365	17.861	26.558	1.00	0.00
	ATOM	891	HD22	ASN	97	1.409	19.221	26.806	1.00	0.00
	ATOM	892	C	ASN	97	-0.746	17.667	30.165	1.00	23.01
5	ATOM	893	O	ASN	97	0.075	18.291	30.847	1.00	21.65
	ATOM	894	N	LEU	98	-0.691	16.353	29.992	1.00	21.64
	ATOM	895	H	LEU	98	-1.373	15.929	29.433	1.00	0.00
	ATOM	896	CA	LEU	98	0.359	15.546	30.594	1.00	21.20
	ATOM	897	CB	LEU	98	-0.034	14.069	30.570	1.00	17.06
10	ATOM	898	CG	LEU	98	-1.357	13.699	31.251	1.00	16.71
	ATOM	899	CD1	LEU	98	-1.549	12.185	31.223	1.00	12.58
	ATOM	900	CD2	LEU	98	-1.370	14.216	32.684	1.00	14.60
	ATOM	901	C	LEU	98	1.684	15.754	29.867	1.00	23.86
	ATOM	902	O	LEU	98	1.835	15.360	28.708	1.00	26.15
15	ATOM	903	N	ARG	99	2.630	16.392	30.549	1.00	26.16
	ATOM	904	H	ARG	99	2.455	16.653	31.475	1.00	0.00
	ATOM	905	CA	ARG	99	3.951	16.674	29.994	1.00	28.30
	ATOM	906	CB	ARG	99	4.241	18.177	30.025	1.00	26.96
	ATOM	907	CG	ARG	99	3.171	19.070	29.447	1.00	30.41
20	ATOM	908	CD	ARG	99	3.508	20.526	29.734	1.00	34.41
	ATOM	909	NE	ARG	99	2.427	21.433	29.355	1.00	38.66
	ATOM	910	HE	ARG	99	1.995	21.299	28.487	1.00	0.00
	ATOM	911	CZ	ARG	99	1.982	22.430	30.116	1.00	41.42
	ATOM	912	NH1	ARG	99	2.521	22.659	31.307	1.00	44.31
25	ATOM	913	HH11	ARG	99	3.261	22.076	31.642	1.00	0.00
	ATOM	914	HH12	ARG	99	2.176	23.402	31.880	1.00	0.00
	ATOM	915	NH2	ARG	99	0.991	23.199	29.685	1.00	42.74
	ATOM	916	HH21	ARG	99	0.582	23.034	28.788	1.00	0.00
	ATOM	917	HH22	ARG	99	0.656	23.950	30.253	1.00	0.00
30	ATOM	918	C	ARG	99	5.022	15.981	30.827	1.00	30.19
	ATOM	919	O	ARG	99	5.260	16.353	31.973	1.00	35.13
	ATOM	920	N	LYS	100	5.682	14.992	30.245	1.00	29.39
	ATOM	921	H	LYS	100	5.435	14.728	29.337	1.00	0.00
	ATOM	922	CA	LYS	100	6.746	14.275	30.935	1.00	27.27
35	ATOM	923	CB	LYS	100	7.818	15.244	31.451	1.00	28.94
	ATOM	924	CG	LYS	100	9.056	14.548	31.998	1.00	38.33
	ATOM	925	CD	LYS	100	10.106	15.539	32.483	1.00	43.68
	ATOM	926	CE	LYS	100	11.359	14.824	32.989	1.00	45.64
	ATOM	927	NZ	LYS	100	11.077	13.949	34.166	1.00	47.84

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	ATOM	928	HZ1	LYS	100	10.401	13.212	33.886	1.00	0.00
	ATOM	929	HZ2	LYS	100	10.658	14.516	34.932	1.00	0.00
	ATOM	930	HZ3	LYS	100	11.961	13.513	34.494	1.00	0.00
	ATOM	931	C	LYS	100	6.306	13.355	32.070	1.00	23.90
5	ATOM	932	O	LYS	100	5.879	13.802	33.136	1.00	21.73
	ATOM	933	N	PRO	101	6.365	12.043	31.827	1.00	20.62
	ATOM	934	CD	PRO	101	6.598	11.395	30.525	1.00	19.79
	ATOM	935	CA	PRO	101	5.985	11.063	32.840	1.00	18.73
	ATOM	936	CB	PRO	101	5.909	9.762	32.040	1.00	20.97
10	ATOM	937	CG	PRO	101	6.897	9.978	30.934	1.00	22.39
	ATOM	938	C	PRO	101	7.058	10.992	33.923	1.00	17.30
	ATOM	939	O	PRO	101	8.252	11.122	33.644	1.00	16.81
	ATOM	940	N	CYS	102	6.633	10.823	35.165	1.00	15.53
	ATOM	941	H	CYS	102	5.688	10.683	35.322	1.00	0.00
15	ATOM	942	CA	CYS	102	7.563	10.720	36.268	1.00	13.89
	ATOM	943	CB	CYS	102	6.898	11.178	37.557	1.00	13.31
	ATOM	944	SG	CYS	102	7.994	11.195	38.960	1.00	16.63
	ATOM	945	C	CYS	102	7.929	9.245	36.344	1.00	14.55
	ATOM	946	O	CYS	102	7.358	8.488	37.130	1.00	15.10
20	ATOM	947	N	ASN	103	8.853	8.834	35.485	1.00	14.85
	ATOM	948	H	ASN	103	9.232	9.505	34.875	1.00	0.00
	ATOM	949	CA	ASN	103	9.283	7.440	35.421	1.00	15.80
	ATOM	950	CB	ASN	103	10.196	7.218	34.212	1.00	16.28
	ATOM	951	CG	ASN	103	9.503	7.509	32.896	1.00	15.02
25	ATOM	952	OD1	ASN	103	8.353	7.121	32.679	1.00	16.41
	ATOM	953	ND2	ASN	103	10.196	8.205	32.013	1.00	20.99
	ATOM	954	HD21	ASN	103	11.100	8.507	32.225	1.00	0.00
	ATOM	955	HD22	ASN	103	9.759	8.409	31.149	1.00	0.00
	ATOM	956	C	ASN	103	9.966	6.941	36.688	1.00	17.75
30	ATOM	957	O	ASN	103	10.709	7.676	37.341	1.00	17.16
	ATOM	958	N	ARG	104	9.699	5.684	37.027	1.00	16.96
	ATOM	959	H	ARG	104	9.110	5.152	36.460	1.00	0.00
	ATOM	960	CA	ARG	104	10.274	5.054	38.207	1.00	19.38
	ATOM	961	CB	ARG	104	9.781	3.610	38.330	1.00	19.40
35	ATOM	962	CG	ARG	104	8.431	3.450	38.999	1.00	17.82
	ATOM	963	CD	ARG	104	8.002	1.999	39.007	1.00	17.65
	ATOM	964	NE	ARG	104	7.520	1.576	37.696	1.00	26.48
	ATOM	965	HE	ARG	104	6.667	1.930	37.380	1.00	0.00
	ATOM	966	CZ	ARG	104	8.170	0.759	36.874	1.00	25.18

	ATOM	967	NH1	ARG	104	9.350	0.260	37.213	1.00	29.12
	ATOM	968	HH11	ARG	104	9.760	0.484	38.095	1.00	0.00
	ATOM	969	HH12	ARG	104	9.829	-0.357	36.586	1.00	0.00
	ATOM	970	NH2	ARG	104	7.628	0.429	35.712	1.00	30.66
5	ATOM	971	HH21	ARG	104	6.735	0.803	35.464	1.00	0.00
	ATOM	972	HH22	ARG	104	8.101	-0.194	35.088	1.00	0.00
	ATOM	973	C	ARG	104	11.796	5.059	38.163	1.00	23.50
	ATOM	974	O	ARG	104	12.395	4.746	37.133	1.00	23.54
	ATOM	975	N	PRO	105	12.440	5.453	39.273	1.00	27.13
10	ATOM	976	CD	PRO	105	11.847	5.983	40.512	1.00	29.49
	ATOM	977	CA	PRO	105	13.902	5.487	39.341	1.00	29.70
	ATOM	978	CB	PRO	105	14.160	5.980	40.760	1.00	30.41
	ATOM	979	CG	PRO	105	12.960	6.824	41.053	1.00	31.24
	ATOM	980	C	PRO	105	14.429	4.070	39.163	1.00	32.78
15	ATOM	981	O	PRO	105	13.750	3.103	39.517	1.00	33.65
	ATOM	982	N	SER	106	15.631	3.946	38.613	1.00	36.54
	ATOM	983	H	SER	106	16.143	4.736	38.342	1.00	0.00
	ATOM	984	CA	SER	106	16.241	2.638	38.393	1.00	37.78
	ATOM	985	CB	SER	106	17.652	2.810	37.829	1.00	40.86
20	ATOM	986	OG	SER	106	17.637	3.643	36.680	1.00	45.12
	ATOM	987	HG	SER	106	17.148	3.214	35.971	1.00	0.00
	ATOM	988	C	SER	106	16.282	1.840	39.697	1.00	37.20
	ATOM	989	O	SER	106	16.701	2.350	40.741	1.00	37.55
	ATOM	990	N	GLY	107	15.808	0.601	39.636	1.00	36.08
25	ATOM	991	H	GLY	107	15.421	0.264	38.806	1.00	0.00
	ATOM	992	CA	GLY	107	15.794	-0.239	40.817	1.00	35.61
	ATOM	993	C	GLY	107	14.462	-0.209	41.544	1.00	34.68
	ATOM	994	O	GLY	107	14.281	-0.921	42.532	1.00	37.59
	ATOM	995	N	LEU	108	13.536	0.621	41.071	1.00	31.21
30	ATOM	996	H	LEU	108	13.708	1.194	40.292	1.00	0.00
	ATOM	997	CA	LEU	108	12.219	0.719	41.683	1.00	29.48
	ATOM	998	CB	LEU	108	11.828	2.184	41.901	1.00	31.06
	ATOM	999	CG	LEU	108	10.439	2.415	42.506	1.00	33.10
	ATOM	1000	CD1	LEU	108	10.341	1.718	43.849	1.00	35.40
35	ATOM	1001	CD2	LEU	108	10.173	3.897	42.660	1.00	34.68
	ATOM	1002	C	LEU	108	11.201	0.036	40.786	1.00	28.12
	ATOM	1003	O	LEU	108	11.107	0.337	39.600	1.00	27.81
	ATOM	1004	N	GLU	109	10.463	-0.908	41.353	1.00	27.83
	ATOM	1005	H	GLU	109	10.572	-1.085	42.309	1.00	0.00

	ATOM	1006	CA	GLU	109	9.448	-1.644	40.612	1.00	26.64
	ATOM	1007	CB	GLU	109	9.663	-3.151	40.801	1.00	33.21
	ATOM	1008	CG	GLU	109	11.066	-3.653	40.433	1.00	42.25
	ATOM	1009	CD	GLU	109	11.373	-3.558	38.940	1.00	48.40
5	ATOM	1010	OE1	GLU	109	11.182	-4.568	38.228	1.00	52.92
	ATOM	1011	OE2	GLU	109	11.821	-2.485	38.479	1.00	51.82
	ATOM	1012	C	GLU	109	8.080	-1.236	41.156	1.00	23.58
	ATOM	1013	O	GLU	109	7.989	-0.648	42.241	1.00	23.49
	ATOM	1014	N	PRO	110	7.002	-1.480	40.389	1.00	19.24
10	ATOM	1015	CD	PRO	110	6.918	-1.981	39.007	1.00	16.22
	ATOM	1016	CA	PRO	110	5.678	-1.103	40.896	1.00	16.34
	ATOM	1017	CB	PRO	110	4.753	-1.406	39.715	1.00	14.78
	ATOM	1018	CG	PRO	110	5.496	-2.439	38.930	1.00	18.83
	ATOM	1019	C	PRO	110	5.337	-1.920	42.144	1.00	16.63
15	ATOM	1020	O	PRO	110	5.600	-3.119	42.202	1.00	16.68
	ATOM	1021	N	GLN	111	4.803	-1.245	43.155	1.00	16.60
	ATOM	1022	H	GLN	111	4.634	-0.287	43.041	1.00	0.00
	ATOM	1023	CA	GLN	111	4.447	-1.869	44.425	1.00	16.91
	ATOM	1024	CB	GLN	111	4.206	-0.774	45.469	1.00	21.09
20	ATOM	1025	CG	GLN	111	3.892	-1.263	46.873	1.00	29.38
	ATOM	1026	CD	GLN	111	5.096	-1.852	47.581	1.00	35.11
	ATOM	1027	OE1	GLN	111	6.224	-1.390	47.404	1.00	39.80
	ATOM	1028	NE2	GLN	111	4.863	-2.881	48.389	1.00	39.14
	ATOM	1029	HE21	GLN	111	3.934	-3.187	48.464	1.00	0.00
25	ATOM	1030	HE22	GLN	111	5.625	-3.267	48.862	1.00	0.00
	ATOM	1031	C	GLN	111	3.220	-2.778	44.329	1.00	15.31
	ATOM	1032	O	GLN	111	2.161	-2.358	43.856	1.00	12.08
	ATOM	1033	N	PRO	112	3.356	-4.052	44.738	1.00	16.34
	ATOM	1034	CD	PRO	112	4.563	-4.760	45.201	1.00	15.65
30	ATOM	1035	CA	PRO	112	2.207	-4.961	44.676	1.00	16.29
	ATOM	1036	CB	PRO	112	2.831	-6.322	44.999	1.00	17.56
	ATOM	1037	CG	PRO	112	3.981	-5.966	45.896	1.00	18.96
	ATOM	1038	C	PRO	112	1.162	-4.553	45.716	1.00	13.47
	ATOM	1039	O	PRO	112	1.510	-4.094	46.810	1.00	12.01
35	ATOM	1040	N	GLY	113	-0.110	-4.671	45.348	1.00	14.46
	ATOM	1041	H	GLY	113	-0.338	-5.036	44.467	1.00	0.00
	ATOM	1042	CA	GLY	113	-1.184	-4.317	46.256	1.00	14.99
	ATOM	1043	C	GLY	113	-1.504	-5.450	47.212	1.00	15.75
	ATOM	1044	O	GLY	113	-1.523	-6.625	46.827	1.00	15.37

	ATOM	1045	N	VAL	114	-1.735	-5.107	48.471	1.00	13.61
	ATOM	1046	H	VAL	114	-1.698	-4.160	48.725	1.00	0.00
	ATOM	1047	CA	VAL	114	-2.060	-6.104	49.472	1.00	12.01
	ATOM	1048	CB	VAL	114	-2.103	-5.481	50.884	1.00	11.85
5	ATOM	1049	CG1	VAL	114	-2.511	-6.519	51.915	1.00	11.29
	ATOM	1050	CG2	VAL	114	-0.738	-4.914	51.236	1.00	11.92
	ATOM	1051	C	VAL	114	-3.386	-6.787	49.134	1.00	11.03
	ATOM	1052	O	VAL	114	-3.474	-8.014	49.197	1.00	11.50
	ATOM	1053	N	PHE	115	-4.389	-6.012	48.721	1.00	10.78
10	ATOM	1054	H	PHE	115	-4.259	-5.036	48.674	1.00	0.00
	ATOM	1055	CA	PHE	115	-5.698	-6.580	48.382	1.00	11.16
	ATOM	1056	CB	PHE	115	-6.701	-5.485	48.003	1.00	9.84
	ATOM	1057	CG	PHE	115	-8.145	-5.914	48.109	1.00	10.03
	ATOM	1058	CD1	PHE	115	-8.517	-6.981	48.927	1.00	7.64
15	ATOM	1059	CD2	PHE	115	-9.136	-5.237	47.409	1.00	11.26
	ATOM	1060	CE1	PHE	115	-9.852	-7.364	49.044	1.00	9.24
	ATOM	1061	CE2	PHE	115	-10.475	-5.615	47.520	1.00	10.69
	ATOM	1062	CZ	PHE	115	-10.830	-6.676	48.338	1.00	9.26
	ATOM	1063	C	PHE	115	-5.598	-7.604	47.255	1.00	11.82
20	ATOM	1064	O	PHE	115	-6.187	-8.678	47.338	1.00	12.23
	ATOM	1065	N	ASP	116	-4.853	-7.262	46.207	1.00	12.76
	ATOM	1066	H	ASP	116	-4.437	-6.379	46.194	1.00	0.00
	ATOM	1067	CA	ASP	116	-4.649	-8.154	45.062	1.00	13.21
	ATOM	1068	CB	ASP	116	-3.735	-7.493	44.019	1.00	15.79
25	ATOM	1069	CG	ASP	116	-4.448	-6.435	43.187	1.00	18.80
	ATOM	1070	OD1	ASP	116	-5.617	-6.109	43.476	1.00	22.22
	ATOM	1071	OD2	ASP	116	-3.831	-5.933	42.227	1.00	23.70
	ATOM	1072	C	ASP	116	-4.001	-9.448	45.534	1.00	12.02
	ATOM	1073	O	ASP	116	-4.399	-10.547	45.137	1.00	12.26
30	ATOM	1074	N	CLE	117	-3.004	-9.295	46.395	1.00	12.55
	ATOM	1075	H	CLE	117	-2.749	-8.387	46.652	1.00	0.00
	ATOM	1076	CA	CLE	117	-2.267	-10.413	46.952	1.00	15.65
	ATOM	1077	CB	CLE	117	-1.156	-9.892	47.847	1.00	16.88
	ATOM	1078	SG	CLE	117	0.032	-11.145	48.309	1.00	24.55
35	ATOM	1079	B	CLE	117	1.502	-9.640	49.805	1.20	27.84
	ATOM	1080	C	CLE	117	-3.171	-11.348	47.746	1.00	17.48
	ATOM	1081	O	CLE	117	-3.040	-12.573	47.655	1.00	18.50
	ATOM	1082	N	LEU	118	-4.077	-10.772	48.533	1.00	16.22
	ATOM	1083	H	LEU	118	-4.145	-9.793	48.594	1.00	0.00

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	ATOM	1084	CA	LEU	118	-5.004	-11.564	49.333	1.00	15.66
	ATOM	1085	CB	LEU	118	-5.621	-10.727	50.458	1.00	15.67
	ATOM	1086	CG	LEU	118	-4.653	-10.113	51.472	1.00	20.69
	ATOM	1087	CD1	LEU	118	-5.420	-9.697	52.717	1.00	25.46
5	ATOM	1088	CD2	LEU	118	-3.561	-11.107	51.840	1.00	26.35
	ATOM	1089	C	LEU	118	-6.107	-12.191	48.484	1.00	15.77
	ATOM	1090	O	LEU	118	-6.496	-13.339	48.718	1.00	15.49
	ATOM	1091	N	ARG	119	-6.603	-11.452	47.495	1.00	14.72
	ATOM	1092	H	ARG	119	-6.276	-10.543	47.372	1.00	0.00
10	ATOM	1093	CA	ARG	119	-7.654	-11.971	46.624	1.00	16.75
	ATOM	1094	CB	ARG	119	-8.187	-10.900	45.672	1.00	14.68
	ATOM	1095	CG	ARG	119	-8.923	-9.767	46.355	1.00	17.93
	ATOM	1096	CD	ARG	119	-9.927	-9.104	45.426	1.00	20.84
	ATOM	1097	NE	ARG	119	-9.383	-8.767	44.110	1.00	26.76
15	ATOM	1098	HE	ARG	119	-9.540	-9.392	43.371	1.00	0.00
	ATOM	1099	CZ	ARG	119	-8.678	-7.672	43.837	1.00	29.78
	ATOM	1100	NH1	ARG	119	-8.412	-6.790	44.789	1.00	31.04
	ATOM	1101	HH11	ARG	119	-8.728	-6.943	45.724	1.00	0.00
	ATOM	1102	HH12	ARG	119	-7.872	-5.976	44.576	1.00	0.00
20	ATOM	1103	NH2	ARG	119	-8.256	-7.447	42.600	1.00	32.50
	ATOM	1104	HH21	ARG	119	-8.466	-8.097	41.867	1.00	0.00
	ATOM	1105	HH22	ARG	119	-7.723	-6.624	42.397	1.00	0.00
	ATOM	1106	C	ARG	119	-7.161	-13.164	45.823	1.00	18.07
	ATOM	1107	O	ARG	119	-7.940	-14.053	45.491	1.00	21.21
25	ATOM	1108	N	ASP	120	-5.870	-13.188	45.514	1.00	17.45
	ATOM	1109	H	ASP	120	-5.289	-12.442	45.768	1.00	0.00
	ATOM	1110	CA	ASP	120	-5.294	-14.298	44.766	1.00	17.83
	ATOM	1111	CB	ASP	120	-3.790	-14.087	44.576	1.00	22.04
	ATOM	1112	CG	ASP	120	-3.118	-15.265	43.903	1.00	23.22
30	ATOM	1113	OD1	ASP	120	-3.371	-15.490	42.702	1.00	26.00
	ATOM	1114	OD2	ASP	120	-2.341	-15.969	44.581	1.00	27.30
	ATOM	1115	C	ASP	120	-5.544	-15.602	45.515	1.00	16.21
	ATOM	1116	O	ASP	120	-6.080	-16.554	44.953	1.00	14.21
	ATOM	1117	N	ALA	121	-5.192	-15.614	46.798	1.00	13.03
35	ATOM	1118	H	ALA	121	-4.782	-14.809	47.181	1.00	0.00
	ATOM	1119	CA	ALA	121	-5.366	-16.787	47.647	1.00	13.21
	ATOM	1120	CB	ALA	121	-4.778	-16.523	49.029	1.00	11.07
	ATOM	1121	C	ALA	121	-6.825	-17.220	47.773	1.00	11.40
	ATOM	1122	O	ALA	121	-7.132	-18.415	47.772	1.00	11.87

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	ATOM	1123	N	SEM	122	-7.721	-16.248	47.885	1.00	9.79
	ATOM	1124	H	SEM	122	-7.400	-15.319	47.872	1.00	0.00
	ATOM	1125	CA	SEM	122	-9.141	-16.521	48.025	1.00	9.76
	ATOM	1126	CB	SEM	122	-9.884	-15.251	48.433	1.00	12.08
5	ATOM	1127	CG	SEM	122	-9.471	-14.699	49.790	1.00	17.34
	ATOM	1128	A	SEM	122	-10.315	-12.991	50.177	1.00	20.79
	ATOM	1129	CE	SEM	122	-9.148	-12.427	51.564	1.00	22.20
	ATOM	1130	C	SEM	122	-9.752	-17.115	46.762	1.00	10.01
	ATOM	1131	O	SEM	122	-10.609	-17.995	46.844	1.00	11.95
10	ATOM	1132	N	VAL	123	-9.329	-16.627	45.600	1.00	10.94
	ATOM	1133	H	VAL	123	-8.673	-15.894	45.592	1.00	0.00
	ATOM	1134	CA	VAL	123	-9.836	-17.140	44.333	1.00	12.22
	ATOM	1135	CB	VAL	123	-9.371	-16.272	43.134	1.00	13.58
	ATOM	1136	CG1	VAL	123	-9.759	-16.926	41.810	1.00	15.25
15	ATOM	1137	CG2	VAL	123	-10.003	-14.894	43.220	1.00	13.81
	ATOM	1138	C	VAL	123	-9.367	-18.583	44.165	1.00	11.57
	ATOM	1139	O	VAL	123	-10.145	-19.454	43.786	1.00	15.13
	ATOM	1140	N	ARG	124	-8.105	-18.843	44.489	1.00	13.03
	ATOM	1141	H	ARG	124	-7.519	-18.104	44.781	1.00	0.00
20	ATOM	1142	CA	ARG	124	-7.559	-20.192	44.384	1.00	15.09
	ATOM	1143	CB	ARG	124	-6.089	-20.219	44.804	1.00	19.47
	ATOM	1144	CG	ARG	124	-5.177	-19.326	43.978	1.00	29.40
	ATOM	1145	CD	ARG	124	-3.720	-19.503	44.389	1.00	34.85
	ATOM	1146	NE	ARG	124	-3.238	-20.849	44.085	1.00	39.82
25	ATOM	1147	HE	ARG	124	-3.340	-21.538	44.777	1.00	0.00
	ATOM	1148	CZ	ARG	124	-2.669	-21.201	42.934	1.00	40.38
	ATOM	1149	NH1	ARG	124	-2.497	-20.304	41.967	1.00	40.47
	ATOM	1150	HH11	ARG	124	-2.791	-19.357	42.092	1.00	0.00
	ATOM	1151	HH12	ARG	124	-2.060	-20.584	41.111	1.00	0.00
30	ATOM	1152	NH2	ARG	124	-2.295	-22.461	42.740	1.00	39.07
	ATOM	1153	HH21	ARG	124	-2.439	-23.141	43.460	1.00	0.00
	ATOM	1154	HH22	ARG	124	-1.862	-22.734	41.883	1.00	0.00
	ATOM	1155	C	ARG	124	-8.356	-21.143	45.271	1.00	13.87
	ATOM	1156	O	ARG	124	-8.776	-22.210	44.829	1.00	11.56
35	ATOM	1157	N	ASP	125	-8.581	-20.738	46.517	1.00	13.96
	ATOM	1158	H	ASP	125	-8.214	-19.874	46.802	1.00	0.00
	ATOM	1159	CA	ASP	125	-9.333	-21.554	47.464	1.00	14.81
	ATOM	1160	CB	ASP	125	-9.308	-20.925	48.861	1.00	18.19
	ATOM	1161	CG	ASP	125	-9.967	-21.807	49.908	1.00	20.88

	ATOM	1162	OD1	ASP	125	-10.978	-21.373	50.496	1.00	26.61
	ATOM	1163	OD2	ASP	125	-9.482	-22.937	50.135	1.00	20.43
	ATOM	1164	C	ASP	125	-10.770	-21.783	46.996	1.00	13.18
	ATOM	1165	O	ASP	125	-11.287	-22.894	47.097	1.00	14.12
5	ATOM	1166	N	TYR	126	-11.407	-20.747	46.463	1.00	12.51
	ATOM	1167	H	TYR	126	-10.954	-19.881	46.429	1.00	0.00
	ATOM	1168	CA	TYR	126	-12.773	-20.879	45.958	1.00	14.80
	ATOM	1169	CB	TYR	126	-13.310	-19.525	45.483	1.00	16.19
	ATOM	1170	CG	TYR	126	-14.764	-19.552	45.050	1.00	19.94
10	ATOM	1171	CD1	TYR	126	-15.789	-19.431	45.984	1.00	22.56
	ATOM	1172	CE1	TYR	126	-17.129	-19.440	45.595	1.00	25.33
	ATOM	1173	CD2	TYR	126	-15.115	-19.687	43.705	1.00	21.52
	ATOM	1174	CE2	TYR	126	-16.453	-19.699	43.304	1.00	22.94
	ATOM	1175	CZ	TYR	126	-17.456	-19.573	44.256	1.00	24.54
15	ATOM	1176	OH	TYR	126	-18.781	-19.560	43.871	1.00	25.75
	ATOM	1177	HH	TYR	126	-19.331	-19.523	44.667	1.00	0.00
	ATOM	1178	C	TYR	126	-12.825	-21.880	44.799	1.00	14.74
	ATOM	1179	O	TYR	126	-13.666	-22.779	44.779	1.00	12.46
	ATOM	1180	N	VAL	127	-11.917	-21.723	43.838	1.00	14.94
20	ATOM	1181	H	VAL	127	-11.265	-21.000	43.917	1.00	0.00
	ATOM	1182	CA	VAL	127	-11.865	-22.608	42.679	1.00	15.31
	ATOM	1183	CB	VAL	127	-10.846	-22.100	41.628	1.00	16.12
	ATOM	1184	CG1	VAL	127	-10.675	-23.120	40.506	1.00	14.89
	ATOM	1185	CG2	VAL	127	-11.320	-20.766	41.050	1.00	14.29
25	ATOM	1186	C	VAL	127	-11.554	-24.049	43.086	1.00	15.31
	ATOM	1187	O	VAL	127	-12.166	-24.991	42.577	1.00	14.57
	ATOM	1188	N	ARG	128	-10.640	-24.213	44.036	1.00	15.60
	ATOM	1189	H	ARG	128	-10.202	-23.424	44.413	1.00	0.00
	ATOM	1190	CA	ARG	128	-10.265	-25.536	44.519	1.00	18.18
30	ATOM	1191	CB	ARG	128	-9.071	-25.435	45.464	1.00	20.53
	ATOM	1192	CG	ARG	128	-8.535	-26.774	45.921	1.00	26.43
	ATOM	1193	CD	ARG	128	-7.466	-26.610	46.986	1.00	31.14
	ATOM	1194	NE	ARG	128	-6.274	-25.919	46.494	1.00	32.88
	ATOM	1195	HE	ARG	128	-5.736	-26.363	45.803	1.00	0.00
35	ATOM	1196	CZ	ARG	128	-5.882	-24.719	46.911	1.00	33.15
	ATOM	1197	NH1	ARG	128	-6.592	-24.062	47.822	1.00	33.64
	ATOM	1198	HH11	ARG	128	-7.423	-24.475	48.195	1.00	0.00
	ATOM	1199	HH12	ARG	128	-6.310	-23.161	48.136	1.00	0.00
	ATOM	1200	NH2	ARG	128	-4.754	-24.197	46.451	1.00	31.81

	ATOM	1201	HH21	ARG	128	-4.207	-24.708	45.789	1.00	0.00
	ATOM	1202	HH22	ARG	128	-4.451	-23.298	46.770	1.00	0.00
	ATOM	1203	C	ARG	128	-11.439	-26.220	45.228	1.00	19.96
	ATOM	1204	O	ARG	128	-11.724	-27.386	44.980	1.00	20.08
5	ATOM	1205	N	GLN	129	-12.136	-25.485	46.087	1.00	21.86
	ATOM	1206	H	GLN	129	-11.861	-24.558	46.234	1.00	0.00
	ATOM	1207	CA	GLN	129	-13.278	-26.040	46.812	1.00	24.92
	ATOM	1208	CB	GLN	129	-13.783	-25.056	47.875	1.00	27.32
	ATOM	1209	CG	GLN	129	-12.763	-24.641	48.919	1.00	38.13
10	ATOM	1210	CD	GLN	129	-12.195	-25.806	49.700	1.00	43.53
	ATOM	1211	OE1	GLN	129	-10.983	-25.900	49.895	1.00	49.52
	ATOM	1212	NE2	GLN	129	-13.066	-26.693	50.167	1.00	46.67
	ATOM	1213	HE21	GLN	129	-14.022	-26.565	50.000	1.00	0.00
	ATOM	1214	HE22	GLN	129	-12.673	-27.439	50.665	1.00	0.00
15	ATOM	1215	C	GLN	129	-14.444	-26.388	45.887	1.00	22.91
	ATOM	1216	O	GLN	129	-15.075	-27.427	46.040	1.00	25.98
	ATOM	1217	N	THR	130	-14.745	-25.500	44.950	1.00	21.09
	ATOM	1218	H	THR	130	-14.243	-24.663	44.875	1.00	0.00
	ATOM	1219	CA	THR	130	-15.858	-25.700	44.036	1.00	20.03
20	ATOM	1220	CB	THR	130	-16.267	-24.365	43.386	1.00	21.01
	ATOM	1221	OG1	THR	130	-16.598	-23.426	44.415	1.00	24.86
	ATOM	1222	HG1	THR	130	-17.447	-23.676	44.803	1.00	0.00
	ATOM	1223	CG2	THR	130	-17.471	-24.545	42.470	1.00	18.89
	ATOM	1224	C	THR	130	-15.639	-26.749	42.951	1.00	20.64
25	ATOM	1225	O	THR	130	-16.476	-27.634	42.771	1.00	21.45
	ATOM	1226	N	TRP	131	-14.524	-26.660	42.234	1.00	18.24
	ATOM	1227	H	TRP	131	-13.871	-25.958	42.438	1.00	0.00
	ATOM	1228	CA	TRP	131	-14.248	-27.599	41.147	1.00	18.29
	ATOM	1229	CB	TRP	131	-13.573	-26.873	39.976	1.00	17.75
30	ATOM	1230	CG	TRP	131	-14.368	-25.715	39.462	1.00	18.23
	ATOM	1231	CD2	TRP	131	-15.316	-25.731	38.385	1.00	20.51
	ATOM	1232	CE2	TRP	131	-15.833	-24.419	38.265	1.00	19.78
	ATOM	1233	CE3	TRP	131	-15.781	-26.722	37.510	1.00	20.37
	ATOM	1234	CD1	TRP	131	-14.349	-24.433	39.935	1.00	18.07
35	ATOM	1235	NE1	TRP	131	-15.225	-23.651	39.223	1.00	19.62
	ATOM	1236	HE1	TRP	131	-15.376	-22.692	39.377	1.00	0.00
	ATOM	1237	CZ2	TRP	131	-16.793	-24.073	37.305	1.00	18.47
	ATOM	1238	CZ3	TRP	131	-16.737	-26.376	36.553	1.00	19.44
	ATOM	1239	CH2	TRP	131	-17.230	-25.062	36.460	1.00	19.54

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	ATOM	1240	C	TRP	131	-13.434	-28.831	41.539	1.00	17.51
	ATOM	1241	O	TRP	131	-13.250	-29.734	40.718	1.00	17.01
	ATOM	1242	N	LYS	132	-12.956	-28.863	42.783	1.00	17.08
	ATOM	1243	H	LYS	132	-13.131	-28.128	43.405	1.00	0.00
5	ATOM	1244	CA	LYS	132	-12.155	-29.977	43.300	1.00	21.35
	ATOM	1245	CB	LYS	132	-13.010	-31.246	43.476	1.00	22.55
	ATOM	1246	CG	LYS	132	-13.864	-31.290	44.741	1.00	27.05
	ATOM	1247	CD	LYS	132	-15.049	-30.351	44.661	1.00	28.94
	ATOM	1248	CE	LYS	132	-15.917	-30.429	45.909	1.00	27.71
10	ATOM	1249	NZ	LYS	132	-15.176	-30.035	47.141	1.00	28.94
	ATOM	1250	HZ1	LYS	132	-14.777	-29.086	47.010	1.00	0.00
	ATOM	1251	HZ2	LYS	132	-14.398	-30.705	47.312	1.00	0.00
	ATOM	1252	HZ3	LYS	132	-15.821	-30.030	47.956	1.00	0.00
	ATOM	1253	C	LYS	132	-10.952	-30.279	42.410	1.00	21.09
15	ATOM	1254	O	LYS	132	-10.616	-31.441	42.177	1.00	22.12
	ATOM	1255	N	LEU	133	-10.311	-29.227	41.915	1.00	22.01
	ATOM	1256	H	LEU	133	-10.601	-28.334	42.179	1.00	0.00
	ATOM	1257	CA	LEU	133	-9.152	-29.376	41.044	1.00	24.78
	ATOM	1258	CB	LEU	133	-9.266	-28.439	39.841	1.00	24.76
20	ATOM	1259	CG	LEU	133	-10.384	-28.729	38.840	1.00	23.74
	ATOM	1260	CD1	LEU	133	-10.423	-27.640	37.792	1.00	18.82
	ATOM	1261	CD2	LEU	133	-10.168	-30.093	38.197	1.00	20.87
	ATOM	1262	C	LEU	133	-7.851	-29.107	41.782	1.00	26.48
	ATOM	1263	O	LEU	133	-7.844	-28.489	42.843	1.00	26.77
25	ATOM	1264	N	GLU	134	-6.745	-29.561	41.204	1.00	31.08
	ATOM	1265	H	GLU	134	-6.783	-30.056	40.359	1.00	0.00
	ATOM	1266	CA	GLU	134	-5.436	-29.365	41.810	1.00	36.68
	ATOM	1267	CB	GLU	134	-5.146	-30.478	42.821	1.00	42.39
	ATOM	1268	CG	GLU	134	-4.135	-30.097	43.901	1.00	50.47
30	ATOM	1269	CD	GLU	134	-4.605	-28.933	44.762	1.00	54.00
	ATOM	1270	OE1	GLU	134	-3.922	-27.885	44.772	1.00	56.35
	ATOM	1271	OE2	GLU	134	-5.658	-29.065	45.426	1.00	55.94
	ATOM	1272	C	GLU	134	-4.369	-29.349	40.720	1.00	36.98
	ATOM	1273	O	GLU	134	-4.655	-29.660	39.559	1.00	37.05
35	ATOM	1274	N	GLY	135	-3.156	-28.946	41.087	1.00	37.39
	ATOM	1275	H	GLY	135	-3.008	-28.662	42.009	1.00	0.00
	ATOM	1276	CA	GLY	135	-2.062	-28.894	40.133	1.00	38.80
	ATOM	1277	C	GLY	135	-2.340	-27.998	38.941	1.00	39.61
	ATOM	1278	O	GLY	135	-3.038	-26.986	39.062	1.00	40.95

	ATOM	1279	N	GLU	136	-1.816	-28.385	37.781	1.00	38.99
	ATOM	1280	H	GLU	136	-1.290	-29.209	37.748	1.00	0.00
	ATOM	1281	CA	GLU	136	-1.999	-27.616	36.553	1.00	38.69
	ATOM	1282	CB	GLU	136	-1.244	-28.259	35.386	1.00	43.51
5	ATOM	1283	CG	GLU	136	0.134	-27.652	35.129	1.00	51.02
	ATOM	1284	CD	GLU	136	0.073	-26.157	34.827	1.00	54.54
	ATOM	1285	OE1	GLU	136	0.533	-25.357	35.672	1.00	54.76
	ATOM	1286	OE2	GLU	136	-0.437	-25.783	33.746	1.00	57.49
	ATOM	1287	C	GLU	136	-3.454	-27.403	36.172	1.00	35.47
10	ATOM	1288	O	GLU	136	-3.795	-26.386	35.564	1.00	33.83
	ATOM	1289	N	ALA	137	-4.304	-28.367	36.514	1.00	32.94
	ATOM	1290	H	ALA	137	-3.975	-29.157	36.985	1.00	0.00
	ATOM	1291	CA	ALA	137	-5.729	-28.268	36.215	1.00	31.07
	ATOM	1292	CB	ALA	137	-6.440	-29.556	36.605	1.00	31.83
15	ATOM	1293	C	ALA	137	-6.314	-27.079	36.976	1.00	27.50
	ATOM	1294	O	ALA	137	-7.031	-26.257	36.405	1.00	29.33
	ATOM	1295	N	LEU	138	-5.963	-26.973	38.254	1.00	24.80
	ATOM	1296	H	LEU	138	-5.350	-27.643	38.627	1.00	0.00
	ATOM	1297	CA	LEU	138	-6.435	-25.884	39.097	1.00	23.90
20	ATOM	1298	CB	LEU	138	-5.909	-26.053	40.520	1.00	21.92
	ATOM	1299	CG	LEU	138	-6.161	-24.920	41.514	1.00	21.33
	ATOM	1300	CD1	LEU	138	-7.648	-24.709	41.716	1.00	22.45
	ATOM	1301	CD2	LEU	138	-5.493	-25.252	42.830	1.00	21.62
	ATOM	1302	C	LEU	138	-5.932	-24.573	38.527	1.00	26.43
25	ATOM	1303	O	LEU	138	-6.686	-23.611	38.401	1.00	25.96
	ATOM	1304	N	GLU	139	-4.649	-24.550	38.179	1.00	30.25
	ATOM	1305	H	GLU	139	-4.110	-25.355	38.336	1.00	0.00
	ATOM	1306	CA	GLU	139	-4.003	-23.373	37.610	1.00	32.41
	ATOM	1307	CB	GLU	139	-2.546	-23.690	37.274	1.00	34.88
30	ATOM	1308	CG	GLU	139	-1.524	-22.848	38.024	1.00	40.02
	ATOM	1309	CD	GLU	139	-1.489	-23.111	39.524	1.00	42.46
	ATOM	1310	OE1	GLU	139	-2.188	-24.025	40.014	1.00	46.36
	ATOM	1311	OE2	GLU	139	-0.743	-22.394	40.220	1.00	44.75
	ATOM	1312	C	GLU	139	-4.726	-22.880	36.363	1.00	33.95
35	ATOM	1313	O	GLU	139	-4.906	-21.679	36.181	1.00	33.01
	ATOM	1314	N	GLN	140	-5.130	-23.808	35.500	1.00	36.05
	ATOM	1315	H	GLN	140	-4.957	-24.758	35.685	1.00	0.00
	ATOM	1316	CA	GLN	140	-5.845	-23.446	34.280	1.00	38.93
	ATOM	1317	CB	GLN	140	-6.008	-24.660	33.356	1.00	43.55

	ATOM	1318	CG	GLN	140	-4.703	-25.295	32.911	1.00	50.09
	ATOM	1319	CD	GLN	140	-3.702	-24.272	32.420	1.00	54.44
	ATOM	1320	OE1	GLN	140	-3.865	-23.688	31.347	1.00	57.43
	ATOM	1321	NE2	GLN	140	-2.662	-24.039	33.212	1.00	54.84
5	ATOM	1322	HE21	GLN	140	-2.611	-24.543	34.051	1.00	0.00
	ATOM	1323	HE22	GLN	140	-2.010	-23.377	32.911	1.00	0.00
	ATOM	1324	C	GLN	140	-7.220	-22.895	34.633	1.00	37.85
	ATOM	1325	O	GLN	140	-7.643	-21.865	34.106	1.00	38.61
	ATOM	1326	N	ALA	141	-7.904	-23.581	35.543	1.00	35.28
10	ATOM	1327	H	ALA	141	-7.494	-24.378	35.939	1.00	0.00
	ATOM	1328	CA	ALA	141	-9.238	-23.188	35.974	1.00	33.81
	ATOM	1329	CB	ALA	141	-9.806	-24.218	36.930	1.00	33.21
	ATOM	1330	C	ALA	141	-9.297	-21.796	36.598	1.00	33.71
	ATOM	1331	O	ALA	141	-10.220	-21.034	36.308	1.00	33.79
15	ATOM	1332	N	ILE	142	-8.321	-21.452	37.436	1.00	34.36
	ATOM	1333	H	ILE	142	-7.602	-22.089	37.625	1.00	0.00
	ATOM	1334	CA	ILE	142	-8.324	-20.137	38.069	1.00	35.58
	ATOM	1335	CB	ILE	142	-7.237	-19.979	39.178	1.00	37.48
	ATOM	1336	CG2	ILE	142	-7.376	-21.080	40.221	1.00	36.69
20	ATOM	1337	CG1	ILE	142	-5.833	-19.991	38.580	1.00	40.54
	ATOM	1338	CD	ILE	142	-4.736	-19.774	39.600	1.00	41.71
	ATOM	1339	C	ILE	142	-8.189	-19.035	37.027	1.00	35.75
	ATOM	1340	O	ILE	142	-8.807	-17.985	37.156	1.00	36.45
	ATOM	1341	N	ILE	143	-7.421	-19.288	35.974	1.00	36.98
25	ATOM	1342	H	ILE	143	-6.962	-20.154	35.905	1.00	0.00
	ATOM	1343	CA	ILE	143	-7.244	-18.299	34.917	1.00	39.87
	ATOM	1344	CB	ILE	143	-6.211	-18.782	33.846	1.00	40.93
	ATOM	1345	CG2	ILE	143	-6.582	-18.283	32.451	1.00	39.88
	ATOM	1346	CG1	ILE	143	-4.804	-18.288	34.195	1.00	41.89
30	ATOM	1347	CD	ILE	143	-4.260	-18.790	35.509	1.00	44.53
	ATOM	1348	C	ILE	143	-8.592	-17.996	34.266	1.00	41.03
	ATOM	1349	O	ILE	143	-8.953	-16.835	34.073	1.00	43.88
	ATOM	1350	N	SER	144	-9.349	-19.046	33.977	1.00	41.09
	ATOM	1351	H	SER	144	-9.002	-19.948	34.145	1.00	0.00
35	ATOM	1352	CA	SER	144	-10.652	-18.908	33.345	1.00	42.72
	ATOM	1353	CB	SER	144	-11.084	-20.261	32.786	1.00	43.70
	ATOM	1354	OG	SER	144	-10.009	-20.876	32.098	1.00	48.58
	ATOM	1355	HG	SER	144	-10.277	-21.685	31.660	1.00	0.00
	ATOM	1356	C	SER	144	-11.740	-18.364	34.274	1.00	42.64

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	ATOM	1357	O	SER	144	-12.612	-17.606	33.845	1.00	43.71
	ATOM	1358	N	GLN	145	-11.692	-18.756	35.543	1.00	42.82
	ATOM	1359	H	GLN	145	-10.944	-19.324	35.823	1.00	0.00
	ATOM	1360	CA	GLN	145	-12.691	-18.335	36.520	1.00	42.48
5	ATOM	1361	CB	GLN	145	-12.879	-19.419	37.585	1.00	43.50
	ATOM	1362	CG	GLN	145	-13.600	-20.664	37.092	1.00	46.68
	ATOM	1363	CD	GLN	145	-15.042	-20.391	36.708	1.00	49.02
	ATOM	1364	OE1	GLN	145	-15.882	-20.086	37.562	1.00	49.76
	ATOM	1365	NE2	GLN	145	-15.341	-20.506	35.419	1.00	48.88
10	ATOM	1366	HE21	GLN	145	-14.639	-20.764	34.792	1.00	0.00
	ATOM	1367	HE22	GLN	145	-16.274	-20.325	35.164	1.00	0.00
	ATOM	1368	C	GLN	145	-12.442	-16.996	37.204	1.00	41.52
	ATOM	1369	O	GLN	145	-13.393	-16.275	37.503	1.00	42.42
	ATOM	1370	N	ALA	146	-11.175	-16.657	37.423	1.00	41.08
15	ATOM	1371	H	ALA	146	-10.480	-17.248	37.094	1.00	0.00
	ATOM	1372	CA	ALA	146	-10.786	-15.418	38.102	1.00	42.09
	ATOM	1373	CB	ALA	146	-9.305	-15.113	37.861	1.00	43.64
	ATOM	1374	C	ALA	146	-11.638	-14.178	37.818	1.00	42.22
	ATOM	1375	O	ALA	146	-12.169	-13.570	38.748	1.00	40.36
20	ATOM	1376	N	PRO	147	-11.807	-13.801	36.535	1.00	42.75
	ATOM	1377	CD	PRO	147	-11.279	-14.419	35.303	1.00	42.03
	ATOM	1378	CA	PRO	147	-12.614	-12.617	36.213	1.00	42.24
	ATOM	1379	CB	PRO	147	-12.433	-12.486	34.699	1.00	42.92
	ATOM	1380	CG	PRO	147	-12.233	-13.908	34.258	1.00	42.35
25	ATOM	1381	C	PRO	147	-14.092	-12.720	36.595	1.00	41.91
	ATOM	1382	O	PRO	147	-14.694	-11.741	37.039	1.00	43.04
	ATOM	1383	N	GLN	148	-14.656	-13.915	36.452	1.00	42.14
	ATOM	1384	H	GLN	148	-14.092	-14.663	36.166	1.00	0.00
	ATOM	1385	CA	GLN	148	-16.065	-14.164	36.753	1.00	41.99
30	ATOM	1386	CB	GLN	148	-16.476	-15.527	36.191	1.00	46.02
	ATOM	1387	CG	GLN	148	-16.113	-15.735	34.728	1.00	52.36
	ATOM	1388	CD	GLN	148	-16.424	-17.140	34.245	1.00	56.58
	ATOM	1389	OE1	GLN	148	-17.548	-17.624	34.391	1.00	60.22
	ATOM	1390	NE2	GLN	148	-15.426	-17.805	33.673	1.00	57.78
35	ATOM	1391	HE21	GLN	148	-14.538	-17.383	33.597	1.00	0.00
	ATOM	1392	HE22	GLN	148	-15.637	-18.697	33.339	1.00	0.00
	ATOM	1393	C	GLN	148	-16.403	-14.109	38.246	1.00	40.35
	ATOM	1394	O	GLN	148	-17.445	-13.576	38.643	1.00	42.32
	ATOM	1395	N	VAL	149	-15.530	-14.677	39.070	1.00	35.77

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	ATOM	1396	H	VAL	149	-14.725	-15.083	38.684	1.00	0.00
	ATOM	1397	CA	VAL	149	-15.747	-14.705	40.512	1.00	30.92
	ATOM	1398	CB	VAL	149	-15.297	-16.056	41.116	1.00	29.67
	ATOM	1399	CG1	VAL	149	-16.047	-17.195	40.452	1.00	31.16
5	ATOM	1400	CG2	VAL	149	-13.798	-16.245	40.942	1.00	27.34
	ATOM	1401	C	VAL	149	-15.034	-13.569	41.242	1.00	29.41
	ATOM	1402	O	VAL	149	-15.112	-13.469	42.466	1.00	25.93
	ATOM	1403	N	GLU	150	-14.375	-12.697	40.485	1.00	29.98
	ATOM	1404	H	GLU	150	-14.357	-12.827	39.513	1.00	0.00
10	ATOM	1405	CA	GLU	150	-13.627	-11.574	41.049	1.00	32.17
	ATOM	1406	CB	GLU	150	-13.075	-10.693	39.922	1.00	38.43
	ATOM	1407	CG	GLU	150	-11.690	-10.097	40.191	1.00	47.19
	ATOM	1408	CD	GLU	150	-10.566	-11.124	40.092	1.00	51.56
	ATOM	1409	OE1	GLU	150	-9.728	-10.999	39.171	1.00	53.66
15	ATOM	1410	OE2	GLU	150	-10.512	-12.052	40.930	1.00	54.50
	ATOM	1411	C	GLU	150	-14.431	-10.720	42.038	1.00	29.05
	ATOM	1412	O	GLU	150	-14.033	-10.555	43.192	1.00	25.94
	ATOM	1413	N	LYS	151	-15.565	-10.195	41.582	1.00	27.58
	ATOM	1414	H	LYS	151	-15.817	-10.387	40.655	1.00	0.00
20	ATOM	1415	CA	LYS	151	-16.432	-9.358	42.406	1.00	25.61
	ATOM	1416	CB	LYS	151	-17.655	-8.926	41.590	1.00	29.92
	ATOM	1417	CG	LYS	151	-18.689	-8.102	42.352	1.00	36.35
	ATOM	1418	CD	LYS	151	-18.247	-6.660	42.574	1.00	42.81
	ATOM	1419	CE	LYS	151	-18.173	-5.880	41.266	1.00	47.01
25	ATOM	1420	NZ	LYS	151	-17.791	-4.452	41.481	1.00	51.50
	ATOM	1421	HZ1	LYS	151	-16.880	-4.410	41.984	1.00	0.00
	ATOM	1422	HZ2	LYS	151	-18.521	-3.974	42.046	1.00	0.00
	ATOM	1423	HZ3	LYS	151	-17.696	-3.973	40.563	1.00	0.00
	ATOM	1424	C	LYS	151	-16.886	-10.100	43.656	1.00	23.86
30	ATOM	1425	O	LYS	151	-16.864	-9.553	44.761	1.00	21.86
	ATOM	1426	N	LEU	152	-17.288	-11.352	43.468	1.00	22.21
	ATOM	1427	H	LEU	152	-17.238	-11.726	42.566	1.00	0.00
	ATOM	1428	CA	LEU	152	-17.768	-12.195	44.556	1.00	20.16
	ATOM	1429	CB	LEU	152	-18.151	-13.579	44.008	1.00	24.21
35	ATOM	1430	CG	LEU	152	-18.970	-14.587	44.830	1.00	28.31
	ATOM	1431	CD1	LEU	152	-18.079	-15.648	45.449	1.00	30.35
	ATOM	1432	CD2	LEU	152	-19.813	-13.875	45.883	1.00	31.40
	ATOM	1433	C	LEU	152	-16.736	-12.305	45.681	1.00	18.41
	ATOM	1434	O	LEU	152	-17.049	-12.034	46.839	1.00	17.53

	ATOM	1435	N	ILE	153	-15.501	-12.650	45.333	1.00	15.66
	ATOM	1436	H	ILE	153	-15.300	-12.822	44.388	1.00	0.00
	ATOM	1437	CA	ILE	153	-14.445	-12.782	46.327	1.00	14.50
	ATOM	1438	CB	ILE	153	-13.169	-13.439	45.728	1.00	14.50
5	ATOM	1439	CG2	ILE	153	-11.944	-13.093	46.556	1.00	13.04
	ATOM	1440	CG1	ILE	153	-13.311	-14.966	45.702	1.00	18.16
	ATOM	1441	CD	ILE	153	-14.378	-15.489	44.791	1.00	18.78
	ATOM	1442	C	ILE	153	-14.102	-11.446	46.986	1.00	14.37
	ATOM	1443	O	ILE	153	-13.967	-11.377	48.209	1.00	13.54
10	ATOM	1444	N	ALA	154	-14.018	-10.386	46.187	1.00	13.14
	ATOM	1445	H	ALA	154	-14.184	-10.504	45.232	1.00	0.00
	ATOM	1446	CA	ALA	154	-13.681	-9.052	46.693	1.00	15.23
	ATOM	1447	CB	ALA	154	-13.464	-8.088	45.530	1.00	12.01
	ATOM	1448	C	ALA	154	-14.690	-8.462	47.685	1.00	14.41
15	ATOM	1449	O	ALA	154	-14.309	-7.939	48.740	1.00	12.98
	ATOM	1450	N	THR	155	-15.973	-8.553	47.366	1.00	14.48
	ATOM	1451	H	THR	155	-16.254	-8.987	46.535	1.00	0.00
	ATOM	1452	CA	THR	155	-16.989	-7.997	48.250	1.00	16.73
	ATOM	1453	CB	THR	155	-18.355	-7.861	47.542	1.00	18.64
20	ATOM	1454	OG1	THR	155	-18.794	-9.139	47.073	1.00	18.35
	ATOM	1455	HG1	THR	155	-18.242	-9.431	46.333	1.00	0.00
	ATOM	1456	CG2	THR	155	-18.239	-6.912	46.361	1.00	21.11
	ATOM	1457	C	THR	155	-17.152	-8.754	49.567	1.00	18.25
	ATOM	1458	O	THR	155	-17.628	-8.191	50.556	1.00	19.74
25	ATOM	1459	N	THR	156	-16.690	-10.000	49.608	1.00	16.51
	ATOM	1460	H	THR	156	-16.290	-10.405	48.811	1.00	0.00
	ATOM	1461	CA	THR	156	-16.816	-10.803	50.816	1.00	16.53
	ATOM	1462	CB	THR	156	-17.514	-12.151	50.491	1.00	18.06
	ATOM	1463	OG1	THR	156	-17.884	-12.806	51.710	1.00	29.31
30	ATOM	1464	HG1	THR	156	-17.083	-13.066	52.183	1.00	0.00
	ATOM	1465	CG2	THR	156	-16.601	-13.057	49.683	1.00	11.43
	ATOM	1466	C	THR	156	-15.502	-11.024	51.584	1.00	15.34
	ATOM	1467	O	THR	156	-15.498	-11.642	52.653	1.00	13.11
	ATOM	1468	N	ALA	157	-14.406	-10.461	51.076	1.00	13.94
35	ATOM	1469	H	ALA	157	-14.471	-9.981	50.225	1.00	0.00
	ATOM	1470	CA	ALA	157	-13.086	-10.594	51.696	1.00	13.07
	ATOM	1471	CB	ALA	157	-12.043	-9.841	50.878	1.00	9.00
	ATOM	1472	C	ALA	157	-13.006	-10.169	53.163	1.00	13.45
	ATOM	1473	O	ALA	157	-12.221	-10.725	53.930	1.00	13.99

	ATOM	1474	N	HIS	158	-13.805	-9.180	53.549	1.00	12.36
	ATOM	1475	H	HIS	158	-14.354	-8.762	52.857	1.00	0.00
	ATOM	1476	CA	HIS	158	-13.809	-8.685	54.925	1.00	13.60
	ATOM	1477	CB	HIS	158	-14.763	-7.495	55.061	1.00	13.48
5	ATOM	1478	CG	HIS	158	-16.195	-7.824	54.759	1.00	12.57
	ATOM	1479	CD2	HIS	158	-17.222	-8.159	55.574	1.00	7.29
	ATOM	1480	ND1	HIS	158	-16.705	-7.830	53.479	1.00	12.96
	ATOM	1481	HD1	HIS	158	-16.243	-7.591	52.643	1.00	0.00
	ATOM	1482	CE1	HIS	158	-17.984	-8.158	53.516	1.00	9.68
10	ATOM	1483	NE2	HIS	158	-18.321	-8.364	54.776	1.00	10.23
	ATOM	1484	HE2	HIS	158	-19.222	-8.640	55.059	1.00	0.00
	ATOM	1485	C	HIS	158	-14.173	-9.752	55.957	1.00	13.56
	ATOM	1486	O	HIS	158	-13.696	-9.718	57.085	1.00	12.70
	ATOM	1487	N	GLU	159	-14.999	-10.709	55.551	1.00	16.31
15	ATOM	1488	H	GLU	159	-15.284	-10.757	54.616	1.00	0.00
	ATOM	1489	CA	GLU	159	-15.451	-11.779	56.434	1.00	21.01
	ATOM	1490	CB	GLU	159	-16.550	-12.589	55.749	1.00	21.32
	ATOM	1491	CG	GLU	159	-17.756	-11.749	55.365	1.00	26.36
	ATOM	1492	CD	GLU	159	-18.864	-12.541	54.710	1.00	30.62
20	ATOM	1493	OE1	GLU	159	-18.718	-13.769	54.541	1.00	36.67
	ATOM	1494	OE2	GLU	159	-19.892	-11.925	54.360	1.00	36.45
	ATOM	1495	C	GLU	159	-14.354	-12.715	56.930	1.00	23.45
	ATOM	1496	O	GLU	159	-14.571	-13.489	57.868	1.00	26.52
	ATOM	1497	N	ARG	160	-13.178	-12.631	56.316	1.00	23.94
25	ATOM	1498	H	ARG	160	-13.026	-11.977	55.608	1.00	0.00
	ATOM	1499	CA	ARG	160	-12.052	-13.481	56.682	1.00	24.21
	ATOM	1500	CB	ARG	160	-11.340	-13.972	55.419	1.00	26.28
	ATOM	1501	CG	ARG	160	-12.276	-14.488	54.342	1.00	29.92
	ATOM	1502	CD	ARG	160	-11.522	-15.319	53.331	1.00	35.32
30	ATOM	1503	NE	ARG	160	-10.957	-16.502	53.971	1.00	38.70
	ATOM	1504	HE	ARG	160	-10.355	-16.364	54.730	1.00	0.00
	ATOM	1505	CZ	ARG	160	-11.186	-17.749	53.578	1.00	41.35
	ATOM	1506	NH1	ARG	160	-11.965	-17.989	52.530	1.00	41.68
	ATOM	1507	HH11	ARG	160	-12.388	-17.232	52.035	1.00	0.00
35	ATOM	1508	HH12	ARG	160	-12.144	-18.927	52.235	1.00	0.00
	ATOM	1509	NH2	ARG	160	-10.669	-18.759	54.266	1.00	43.07
	ATOM	1510	HH21	ARG	160	-10.108	-18.586	55.074	1.00	0.00
	ATOM	1511	HH22	ARG	160	-10.839	-19.698	53.968	1.00	0.00
	ATOM	1512	C	ARG	160	-11.046	-12.749	57.562	1.00	23.53

	ATOM	1513	O	ARG	160	-10.110	-13.355	58.090	1.00	23.47
	ATOM	1514	N	SEM	161	-11.239	-11.444	57.716	1.00	21.32
	ATOM	1515	H	SEM	161	-12.039	-11.020	57.353	1.00	0.00
	ATOM	1516	CA	SEM	161	-10.329	-10.623	58.501	1.00	18.41
5	ATOM	1517	CB	SEM	161	-10.334	-9.192	57.963	1.00	18.20
	ATOM	1518	CG	SEM	161	-10.002	-9.089	56.474	1.00	17.50
	ATOM	1519	A	SEM	161	-8.302	-9.909	56.033	1.00	19.57
	ATOM	1520	CE	SEM	161	-7.032	-8.759	56.813	1.00	18.11
	ATOM	1521	C	SEM	161	-10.665	-10.643	59.990	1.00	16.60
10	ATOM	1522	O	SEM	161	-11.834	-10.647	60.370	1.00	17.62
	ATOM	1523	N	PRO	162	-9.635	-10.613	60.850	1.00	16.11
	ATOM	1524	CD	PRO	162	-8.216	-10.576	60.459	1.00	17.97
	ATOM	1525	CA	PRO	162	-9.766	-10.629	62.314	1.00	17.72
	ATOM	1526	CB	PRO	162	-8.326	-10.423	62.779	1.00	17.28
15	ATOM	1527	CG	PRO	162	-7.530	-11.077	61.704	1.00	19.86
	ATOM	1528	C	PRO	162	-10.669	-9.526	62.867	1.00	18.86
	ATOM	1529	O	PRO	162	-11.363	-9.716	63.869	1.00	17.42
	ATOM	1530	N	TRP	163	-10.633	-8.368	62.215	1.00	18.22
	ATOM	1531	H	TRP	163	-10.058	-8.304	61.429	1.00	0.00
20	ATOM	1532	CA	TRP	163	-11.419	-7.214	62.634	1.00	14.35
	ATOM	1533	CB	TRP	163	-10.816	-5.914	62.076	1.00	12.07
	ATOM	1534	CG	TRP	163	-10.401	-5.950	60.614	1.00	11.68
	ATOM	1535	CD2	TRP	163	-11.256	-5.810	59.471	1.00	10.99
	ATOM	1536	CE2	TRP	163	-10.426	-5.805	58.326	1.00	11.80
25	ATOM	1537	CE3	TRP	163	-12.641	-5.682	59.303	1.00	12.54
	ATOM	1538	CD1	TRP	163	-9.124	-6.034	60.126	1.00	10.94
	ATOM	1539	NE1	TRP	163	-9.133	-5.941	58.754	1.00	12.98
	ATOM	1540	HE1	TRP	163	-8.326	-5.895	58.178	1.00	0.00
	ATOM	1541	CZ2	TRP	163	-10.938	-5.674	57.030	1.00	11.75
30	ATOM	1542	CZ3	TRP	163	-13.151	-5.550	58.012	1.00	15.49
	ATOM	1543	CH2	TRP	163	-12.299	-5.548	56.894	1.00	11.88
	ATOM	1544	C	TRP	163	-12.915	-7.278	62.354	1.00	13.04
	ATOM	1545	O	TRP	163	-13.662	-6.417	62.816	1.00	14.42
	ATOM	1546	N	TYR	164	-13.363	-8.280	61.607	1.00	13.04
35	ATOM	1547	H	TYR	164	-12.770	-8.981	61.266	1.00	0.00
	ATOM	1548	CA	TYR	164	-14.783	-8.400	61.317	1.00	14.03
	ATOM	1549	CB	TYR	164	-15.034	-8.901	59.893	1.00	11.45
	ATOM	1550	CG	TYR	164	-16.502	-8.909	59.522	1.00	10.45
	ATOM	1551	CD1	TYR	164	-17.209	-7.717	59.384	1.00	11.63

	ATOM	1552	CE1	TYR	164	-18.568	-7.714	59.062	1.00	11.94
	ATOM	1553	CD2	TYR	164	-17.189	-10.107	59.326	1.00	11.28
	ATOM	1554	CE2	TYR	164	-18.543	-10.114	59.002	1.00	12.61
	ATOM	1555	CZ	TYR	164	-19.225	-8.917	58.873	1.00	13.23
5	ATOM	1556	OH	TYR	164	-20.563	-8.923	58.556	1.00	18.84
	ATOM	1557	HH	TYR	164	-20.907	-8.037	58.691	1.00	0.00
	ATOM	1558	C	TYR	164	-15.466	-9.327	62.311	1.00	14.87
	ATOM	1559	O	TYR	164	-15.013	-10.447	62.538	1.00	15.57
	ATOM	1560	N	HIS	165	-16.552	-8.846	62.908	1.00	15.89
10	ATOM	1561	H	HIS	165	-16.875	-7.950	62.663	1.00	0.00
	ATOM	1562	CA	HIS	165	-17.315	-9.622	63.878	1.00	17.82
	ATOM	1563	CB	HIS	165	-17.376	-8.902	65.231	1.00	18.47
	ATOM	1564	CG	HIS	165	-16.045	-8.762	65.910	1.00	16.54
	ATOM	1565	CD2	HIS	165	-14.915	-8.114	65.538	1.00	14.16
15	ATOM	1566	ND1	HIS	165	-15.776	-9.320	67.142	1.00	14.58
	ATOM	1567	HD1	HIS	165	-16.276	-9.959	67.702	1.00	0.00
	ATOM	1568	CE1	HIS	165	-14.541	-9.018	67.500	1.00	15.81
	ATOM	1569	NE2	HIS	165	-13.997	-8.289	66.543	1.00	15.66
	ATOM	1570	HE2	HIS	165	-13.064	-8.031	66.556	1.00	0.00
20	ATOM	1571	C	HIS	165	-18.713	-9.820	63.321	1.00	18.44
	ATOM	1572	O	HIS	165	-19.497	-8.876	63.238	1.00	19.84
	ATOM	1573	N	SER	166	-19.007	-11.056	62.925	1.00	21.85
	ATOM	1574	H	SER	166	-18.316	-11.751	62.997	1.00	0.00
	ATOM	1575	CA	SER	166	-20.296	-11.434	62.345	1.00	24.63
25	ATOM	1576	CB	SER	166	-20.289	-12.922	61.981	1.00	25.45
	ATOM	1577	OG	SER	166	-19.253	-13.209	61.056	1.00	36.62
	ATOM	1578	HG	SER	166	-18.382	-13.082	61.448	1.00	0.00
	ATOM	1579	C	SER	166	-21.521	-11.138	63.203	1.00	24.57
	ATOM	1580	O	SER	166	-22.593	-10.850	62.672	1.00	24.97
30	ATOM	1581	N	SER	167	-21.382	-11.261	64.518	1.00	25.49
	ATOM	1582	H	SER	167	-20.541	-11.538	64.921	1.00	0.00
	ATOM	1583	CA	SER	167	-22.504	-11.000	65.408	1.00	30.48
	ATOM	1584	CB	SER	167	-23.222	-12.301	65.777	1.00	31.09
	ATOM	1585	OG	SER	167	-23.709	-12.957	64.618	1.00	36.91
35	ATOM	1586	HG	SER	167	-24.177	-12.308	64.074	1.00	0.00
	ATOM	1587	C	SER	167	-22.069	-10.265	66.662	1.00	30.67
	ATOM	1588	O	SER	167	-21.564	-10.863	67.617	1.00	34.44
	ATOM	1589	N	LEU	168	-22.237	-8.952	66.629	1.00	27.52
	ATOM	1590	H	LEU	168	-22.633	-8.515	65.836	1.00	0.00

	ATOM	1591	CA	LEU	168	-21.894	-8.096	67.747	1.00	23.85
	ATOM	1592	CB	LEU	168	-20.504	-7.487	67.587	1.00	23.06
	ATOM	1593	CG	LEU	168	-19.283	-8.162	68.190	1.00	22.81
	ATOM	1594	CD1	LEU	168	-18.189	-7.116	68.286	1.00	20.60
5	ATOM	1595	CD2	LEU	168	-19.596	-8.715	69.558	1.00	22.00
	ATOM	1596	C	LEU	168	-22.886	-6.969	67.769	1.00	22.39
	ATOM	1597	O	LEU	168	-23.127	-6.325	66.747	1.00	23.43
	ATOM	1598	N	THR	169	-23.498	-6.751	68.920	1.00	20.11
	ATOM	1599	H	THR	169	-23.297	-7.292	69.704	1.00	0.00
10	ATOM	1600	CA	THR	169	-24.431	-5.655	69.047	1.00	18.64
	ATOM	1601	CB	THR	169	-25.503	-5.944	70.120	1.00	20.52
	ATOM	1602	OG1	THR	169	-24.876	-6.164	71.390	1.00	21.40
	ATOM	1603	HG1	THR	169	-25.601	-6.350	72.002	1.00	0.00
	ATOM	1604	CG2	THR	169	-26.313	-7.180	69.738	1.00	22.55
15	ATOM	1605	C	THR	169	-23.547	-4.494	69.485	1.00	16.14
	ATOM	1606	O	THR	169	-22.355	-4.682	69.759	1.00	14.33
	ATOM	1607	N	ARG	170	-24.125	-3.304	69.557	1.00	17.90
	ATOM	1608	H	ARG	170	-25.076	-3.202	69.314	1.00	0.00
	ATOM	1609	CA	ARG	170	-23.383	-2.125	69.975	1.00	16.65
20	ATOM	1610	CB	ARG	170	-24.302	-0.907	69.956	1.00	15.78
	ATOM	1611	CG	ARG	170	-23.645	0.392	70.358	1.00	16.09
	ATOM	1612	CD	ARG	170	-24.672	1.495	70.345	1.00	17.74
	ATOM	1613	NE	ARG	170	-24.099	2.796	70.649	1.00	17.11
	ATOM	1614	HE	ARG	170	-23.788	2.980	71.549	1.00	0.00
25	ATOM	1615	CZ	ARG	170	-23.966	3.775	69.762	1.00	16.57
	ATOM	1616	NH1	ARG	170	-23.442	4.933	70.132	1.00	15.48
	ATOM	1617	HH11	ARG	170	-23.176	5.091	71.081	1.00	0.00
	ATOM	1618	HH12	ARG	170	-23.372	5.687	69.486	1.00	0.00
	ATOM	1619	NH2	ARG	170	-24.327	3.589	68.501	1.00	15.05
30	ATOM	1620	HH21	ARG	170	-24.701	2.709	68.207	1.00	0.00
	ATOM	1621	HH22	ARG	170	-24.185	4.334	67.852	1.00	0.00
	ATOM	1622	C	ARG	170	-22.799	-2.329	71.375	1.00	16.82
	ATOM	1623	O	ARG	170	-21.631	-2.013	71.616	1.00	16.43
	ATOM	1624	N	GLU	171	-23.603	-2.877	72.284	1.00	16.19
35	ATOM	1625	H	GLU	171	-24.524	-3.101	72.035	1.00	0.00
	ATOM	1626	CA	GLU	171	-23.157	-3.114	73.654	1.00	17.65
	ATOM	1627	CB	GLU	171	-24.296	-3.656	74.521	1.00	20.42
	ATOM	1628	CG	GLU	171	-23.890	-3.861	75.985	1.00	28.15
	ATOM	1629	CD	GLU	171	-24.931	-4.598	76.818	1.00	33.50

	ATOM	1630	OE1	GLU	171	-24.529	-5.400	77.688	1.00	35.78
	ATOM	1631	OE2	GLU	171	-26.144	-4.371	76.619	1.00	38.13
	ATOM	1632	C	GLU	171	-21.980	-4.075	73.721	1.00	15.35
	ATOM	1633	O	GLU	171	-20.990	-3.816	74.418	1.00	13.06
5	ATOM	1634	N	GLU	172	-22.095	-5.187	73.001	1.00	16.60
	ATOM	1635	H	GLU	172	-22.905	-5.331	72.465	1.00	0.00
	ATOM	1636	CA	GLU	172	-21.041	-6.193	72.977	1.00	16.42
	ATOM	1637	CB	GLU	172	-21.497	-7.427	72.206	1.00	18.60
	ATOM	1638	CG	GLU	172	-22.697	-8.119	72.818	1.00	24.77
10	ATOM	1639	CD	GLU	172	-23.255	-9.223	71.940	1.00	30.30
	ATOM	1640	OE1	GLU	172	-23.063	-9.176	70.706	1.00	30.79
	ATOM	1641	OE2	GLU	172	-23.901	-10.141	72.486	1.00	35.30
	ATOM	1642	C	GLU	172	-19.780	-5.617	72.357	1.00	15.63
	ATOM	1643	O	GLU	172	-18.674	-5.933	72.790	1.00	18.34
15	ATOM	1644	N	ALA	173	-19.946	-4.763	71.351	1.00	16.15
	ATOM	1645	H	ALA	173	-20.848	-4.556	71.029	1.00	0.00
	ATOM	1646	CA	ALA	173	-18.805	-4.132	70.695	1.00	13.89
	ATOM	1647	CB	ALA	173	-19.273	-3.292	69.520	1.00	14.91
	ATOM	1648	C	ALA	173	-18.053	-3.266	71.703	1.00	11.93
20	ATOM	1649	O	ALA	173	-16.831	-3.338	71.806	1.00	12.06
	ATOM	1650	N	GLU	174	-18.791	-2.471	72.471	1.00	13.97
	ATOM	1651	H	GLU	174	-19.767	-2.481	72.349	1.00	0.00
	ATOM	1652	CA	GLU	174	-18.178	-1.603	73.471	1.00	13.42
	ATOM	1653	CB	GLU	174	-19.204	-0.636	74.064	1.00	12.52
25	ATOM	1654	CG	GLU	174	-19.696	0.413	73.072	1.00	13.96
	ATOM	1655	CD	GLU	174	-20.406	1.582	73.734	1.00	16.34
	ATOM	1656	OE1	GLU	174	-20.943	2.438	73.004	1.00	17.65
	ATOM	1657	OE2	GLU	174	-20.423	1.658	74.979	1.00	20.00
	ATOM	1658	C	GLU	174	-17.517	-2.418	74.574	1.00	14.72
30	ATOM	1659	O	GLU	174	-16.446	-2.059	75.062	1.00	16.13
	ATOM	1660	N	ARG	175	-18.144	-3.525	74.953	1.00	16.98
	ATOM	1661	H	ARG	175	-18.996	-3.758	74.523	1.00	0.00
	ATOM	1662	CA	ARG	175	-17.592	-4.387	75.987	1.00	17.73
	ATOM	1663	CB	ARG	175	-18.566	-5.516	76.317	1.00	20.45
35	ATOM	1664	CG	ARG	175	-18.072	-6.491	77.373	1.00	27.83
	ATOM	1665	CD	ARG	175	-19.238	-7.101	78.146	1.00	32.77
	ATOM	1666	NE	ARG	175	-20.332	-7.531	77.274	1.00	38.89
	ATOM	1667	HE	ARG	175	-20.118	-8.137	76.537	1.00	0.00
	ATOM	1668	CZ	ARG	175	-21.602	-7.152	77.416	1.00	41.12

	ATOM	1669	NH1	ARG	175	-21.955	-6.333	78.400	1.00	40.50
	ATOM	1670	HH11	ARG	175	-21.266	-5.992	79.041	1.00	0.00
	ATOM	1671	HH12	ARG	175	-22.906	-6.052	78.508	1.00	0.00
	ATOM	1672	NH2	ARG	175	-22.522	-7.585	76.563	1.00	42.19
5	ATOM	1673	HH21	ARG	175	-22.264	-8.200	75.819	1.00	0.00
	ATOM	1674	HH22	ARG	175	-23.475	-7.301	76.675	1.00	0.00
	ATOM	1675	C	ARG	175	-16.245	-4.944	75.542	1.00	18.13
	ATOM	1676	O	ARG	175	-15.305	-4.989	76.330	1.00	17.99
	ATOM	1677	N	LYS	176	-16.133	-5.319	74.270	1.00	19.22
10	ATOM	1678	H	LYS	176	-16.906	-5.249	73.671	1.00	0.00
	ATOM	1679	CA	LYS	176	-14.872	-5.853	73.757	1.00	19.25
	ATOM	1680	CB	LYS	176	-15.070	-6.569	72.420	1.00	20.57
	ATOM	1681	CG	LYS	176	-15.907	-7.827	72.531	1.00	24.61
	ATOM	1682	CD	LYS	176	-15.949	-8.609	71.230	1.00	31.16
15	ATOM	1683	CE	LYS	176	-14.759	-9.547	71.088	1.00	36.55
	ATOM	1684	NZ	LYS	176	-13.455	-8.837	70.995	1.00	41.60
	ATOM	1685	HZ1	LYS	176	-13.289	-8.308	71.876	1.00	0.00
	ATOM	1686	HZ2	LYS	176	-13.483	-8.179	70.192	1.00	0.00
	ATOM	1687	HZ3	LYS	176	-12.687	-9.525	70.849	1.00	0.00
20	ATOM	1688	C	LYS	176	-13.806	-4.776	73.622	1.00	19.16
	ATOM	1689	O	LYS	176	-12.645	-5.006	73.952	1.00	20.81
	ATOM	1690	N	LEU	177	-14.199	-3.597	73.150	1.00	18.33
	ATOM	1691	H	LEU	177	-15.133	-3.466	72.878	1.00	0.00
	ATOM	1692	CA	LEU	177	-13.251	-2.499	72.994	1.00	18.62
25	ATOM	1693	CB	LEU	177	-13.857	-1.375	72.153	1.00	14.79
	ATOM	1694	CG	LEU	177	-14.119	-1.701	70.681	1.00	14.52
	ATOM	1695	CD1	LEU	177	-14.746	-0.502	70.016	1.00	14.81
	ATOM	1696	CD2	LEU	177	-12.833	-2.073	69.972	1.00	12.01
	ATOM	1697	C	LEU	177	-12.742	-1.950	74.328	1.00	19.76
30	ATOM	1698	O	LEU	177	-11.562	-1.628	74.456	1.00	20.72
	ATOM	1699	N	TYR	178	-13.632	-1.839	75.312	1.00	20.07
	ATOM	1700	H	TYR	178	-14.555	-2.105	75.139	1.00	0.00
	ATOM	1701	CA	TYR	178	-13.263	-1.334	76.634	1.00	21.20
	ATOM	1702	CB	TYR	178	-14.507	-0.935	77.425	1.00	18.72
35	ATOM	1703	CG	TYR	178	-15.063	0.420	77.073	1.00	16.53
	ATOM	1704	CD1	TYR	178	-14.238	1.543	77.029	1.00	17.03
	ATOM	1705	CE1	TYR	178	-14.752	2.796	76.738	1.00	14.85
	ATOM	1706	CD2	TYR	178	-16.418	0.587	76.813	1.00	15.41
	ATOM	1707	CE2	TYR	178	-16.942	1.833	76.520	1.00	14.24

	ATOM	1708	CZ	TYR	178	-16.105	2.935	76.485	1.00	15.80
	ATOM	1709	OH	TYR	178	-16.624	4.177	76.198	1.00	17.17
	ATOM	1710	HH	TYR	178	-17.593	4.110	76.183	1.00	0.00
	ATOM	1711	C	TYR	178	-12.471	-2.349	77.446	1.00	24.65
5	ATOM	1712	O	TYR	178	-11.596	-1.986	78.233	1.00	26.95
	ATOM	1713	N	SER	179	-12.791	-3.622	77.266	1.00	31.05
	ATOM	1714	H	SER	179	-13.473	-3.885	76.617	1.00	0.00
	ATOM	1715	CA	SER	179	-12.116	-4.680	77.998	1.00	35.86
	ATOM	1716	CB	SER	179	-13.067	-5.861	78.220	1.00	37.01
10	ATOM	1717	OG	SER	179	-14.265	-5.444	78.868	1.00	38.69
	ATOM	1718	HG	SER	179	-14.778	-5.012	78.177	1.00	0.00
	ATOM	1719	C	SER	179	-10.869	-5.126	77.251	1.00	39.08
	ATOM	1720	O	SER	179	-10.909	-6.065	76.456	1.00	42.60
	ATOM	1721	N	GLY	180	-9.765	-4.432	77.498	1.00	42.38
15	ATOM	1722	H	GLY	180	-9.787	-3.665	78.115	1.00	0.00
	ATOM	1723	CA	GLY	180	-8.516	-4.773	76.846	1.00	45.79
	ATOM	1724	C	GLY	180	-7.445	-3.734	77.103	1.00	47.21
	ATOM	1725	O	GLY	180	-7.400	-3.126	78.171	1.00	47.24
	ATOM	1726	N	ALA	181	-6.590	-3.519	76.109	1.00	48.92
20	ATOM	1727	H	ALA	181	-6.697	-4.028	75.282	1.00	0.00
	ATOM	1728	CA	ALA	181	-5.508	-2.549	76.222	1.00	50.24
	ATOM	1729	CB	ALA	181	-4.423	-2.857	75.197	1.00	49.84
	ATOM	1730	C	ALA	181	-6.006	-1.111	76.055	1.00	51.23
	ATOM	1731	O	ALA	181	-5.331	-0.165	76.465	1.00	54.12
25	ATOM	1732	N	GLN	182	-7.179	-0.953	75.446	1.00	50.07
	ATOM	1733	H	GLN	182	-7.676	-1.742	75.154	1.00	0.00
	ATOM	1734	CA	GLN	182	-7.772	0.365	75.214	1.00	47.88
	ATOM	1735	CB	GLN	182	-8.274	0.993	76.521	1.00	49.86
	ATOM	1736	CG	GLN	182	-9.511	0.332	77.103	1.00	53.43
30	ATOM	1737	CD	GLN	182	-10.189	1.192	78.152	1.00	57.83
	ATOM	1738	OE1	GLN	182	-10.327	0.796	79.308	1.00	60.70
	ATOM	1739	NE2	GLN	182	-10.616	2.383	77.752	1.00	58.70
	ATOM	1740	HE21	GLN	182	-10.461	2.650	76.828	1.00	0.00
	ATOM	1741	HE22	GLN	182	-11.079	2.922	78.427	1.00	0.00
35	ATOM	1742	C	GLN	182	-6.832	1.332	74.497	1.00	43.44
	ATOM	1743	O	GLN	182	-6.892	2.548	74.703	1.00	41.92
	ATOM	1744	N	THR	183	-5.972	0.789	73.643	1.00	39.92
	ATOM	1745	H	THR	183	-5.956	-0.170	73.460	1.00	0.00
	ATOM	1746	CA	THR	183	-5.036	1.606	72.891	1.00	36.35

	ATOM	1747	CB	THR	183	-3.864	0.758	72.357	1.00	38.51
	ATOM	1748	OG1	THR	183	-4.351	-0.519	71.923	1.00	42.00
	ATOM	1749	HG1	THR	183	-3.917	-0.732	71.092	1.00	0.00
	ATOM	1750	CG2	THR	183	-2.830	0.542	73.457	1.00	39.77
5	ATOM	1751	C	THR	183	-5.758	2.321	71.749	1.00	32.35
	ATOM	1752	O	THR	183	-6.676	1.772	71.132	1.00	29.04
	ATOM	1753	N	ASP	184	-5.367	3.567	71.508	1.00	27.99
	ATOM	1754	H	ASP	184	-4.644	3.943	72.040	1.00	0.00
	ATOM	1755	CA	ASP	184	-5.975	4.376	70.460	1.00	27.05
10	ATOM	1756	CB	ASP	184	-5.285	5.742	70.374	1.00	27.76
	ATOM	1757	CG	ASP	184	-5.617	6.647	71.553	1.00	29.09
	ATOM	1758	OD1	ASP	184	-4.767	7.483	71.914	1.00	30.44
	ATOM	1759	OD2	ASP	184	-6.729	6.539	72.109	1.00	30.19
	ATOM	1760	C	ASP	184	-5.973	3.701	69.092	1.00	23.21
15	ATOM	1761	O	ASP	184	-5.000	3.054	68.704	1.00	22.81
	ATOM	1762	N	GLY	185	-7.088	3.826	68.385	1.00	22.28
	ATOM	1763	H	GLY	185	-7.863	4.278	68.784	1.00	0.00
	ATOM	1764	CA	GLY	185	-7.200	3.235	67.068	1.00	20.98
	ATOM	1765	C	GLY	185	-7.690	1.800	67.065	1.00	20.58
20	ATOM	1766	O	GLY	185	-7.879	1.223	65.994	1.00	21.98
	ATOM	1767	N	LYS	186	-7.847	1.198	68.241	1.00	19.39
	ATOM	1768	H	LYS	186	-7.620	1.668	69.072	1.00	0.00
	ATOM	1769	CA	LYS	186	-8.343	-0.173	68.330	1.00	19.96
	ATOM	1770	CB	LYS	186	-8.385	-0.628	69.790	1.00	24.49
25	ATOM	1771	CG	LYS	186	-8.935	-2.022	69.996	1.00	30.49
	ATOM	1772	CD	LYS	186	-8.020	-3.081	69.408	1.00	39.02
	ATOM	1773	CE	LYS	186	-6.799	-3.343	70.288	1.00	47.08
	ATOM	1774	NZ	LYS	186	-5.832	-2.209	70.348	1.00	51.52
	ATOM	1775	HZ1	LYS	186	-6.284	-1.364	70.753	1.00	0.00
30	ATOM	1776	HZ2	LYS	186	-5.492	-1.990	69.391	1.00	0.00
	ATOM	1777	HZ3	LYS	186	-5.026	-2.478	70.946	1.00	0.00
	ATOM	1778	C	LYS	186	-9.753	-0.153	67.742	1.00	17.33
	ATOM	1779	O	LYS	186	-10.603	0.617	68.198	1.00	17.32
	ATOM	1780	N	PHE	187	-10.008	-1.010	66.756	1.00	14.12
35	ATOM	1781	H	PHE	187	-9.312	-1.637	66.467	1.00	0.00
	ATOM	1782	CA	PHE	187	-11.305	-1.032	66.092	1.00	10.45
	ATOM	1783	CB	PHE	187	-11.202	-0.237	64.786	1.00	11.01
	ATOM	1784	CG	PHE	187	-10.455	-0.967	63.697	1.00	12.30
	ATOM	1785	CD1	PHE	187	-11.142	-1.525	62.618	1.00	11.77

	ATOM	1786	CD2	PHE	187	-9.073	-1.137	63.770	1.00	10.05
	ATOM	1787	CE1	PHE	187	-10.461	-2.246	61.635	1.00	10.76
	ATOM	1788	CE2	PHE	187	-8.385	-1.857	62.788	1.00	10.66
	ATOM	1789	CZ	PHE	187	-9.081	-2.411	61.723	1.00	8.89
5	ATOM	1790	C	PHE	187	-11.844	-2.421	65.754	1.00	11.49
	ATOM	1791	O	PHE	187	-11.157	-3.432	65.903	1.00	12.56
	ATOM	1792	N	LEU	188	-13.071	-2.437	65.243	1.00	11.03
	ATOM	1793	H	LEU	188	-13.567	-1.591	65.168	1.00	0.00
	ATOM	1794	CA	LEU	188	-13.752	-3.644	64.802	1.00	10.57
10	ATOM	1795	CB	LEU	188	-14.276	-4.474	65.988	1.00	13.68
	ATOM	1796	CG	LEU	188	-15.280	-3.955	67.030	1.00	12.79
	ATOM	1797	CD1	LEU	188	-16.689	-3.832	66.447	1.00	12.29
	ATOM	1798	CD2	LEU	188	-15.290	-4.941	68.190	1.00	10.52
	ATOM	1799	C	LEU	188	-14.888	-3.218	63.881	1.00	10.06
15	ATOM	1800	O	LEU	188	-15.359	-2.082	63.956	1.00	11.34
	ATOM	1801	N	LEU	189	-15.286	-4.107	62.980	1.00	11.08
	ATOM	1802	H	LEU	189	-14.863	-4.989	62.944	1.00	0.00
	ATOM	1803	CA	LEU	189	-16.363	-3.830	62.039	1.00	11.26
	ATOM	1804	CB	LEU	189	-15.845	-3.967	60.597	1.00	14.05
20	ATOM	1805	CG	LEU	189	-16.568	-3.364	59.379	1.00	18.08
	ATOM	1806	CD1	LEU	189	-17.908	-4.020	59.126	1.00	20.55
	ATOM	1807	CD2	LEU	189	-16.725	-1.869	59.551	1.00	21.24
	ATOM	1808	C	LEU	189	-17.449	-4.858	62.332	1.00	10.17
	ATOM	1809	O	LEU	189	-17.160	-6.037	62.539	1.00	9.97
25	ATOM	1810	N	ARG	190	-18.696	-4.416	62.364	1.00	8.42
	ATOM	1811	H	ARG	190	-18.893	-3.469	62.193	1.00	0.00
	ATOM	1812	CA	ARG	190	-19.803	-5.313	62.658	1.00	10.21
	ATOM	1813	CB	ARG	190	-20.199	-5.183	64.137	1.00	12.50
	ATOM	1814	CG	ARG	190	-20.586	-3.758	64.560	1.00	11.39
30	ATOM	1815	CD	ARG	190	-20.747	-3.613	66.072	1.00	10.81
	ATOM	1816	NE	ARG	190	-20.865	-2.210	66.479	1.00	10.25
	ATOM	1817	HE	ARG	190	-20.054	-1.759	66.795	1.00	0.00
	ATOM	1818	CZ	ARG	190	-21.993	-1.501	66.454	1.00	8.67
	ATOM	1819	NH1	ARG	190	-23.133	-2.044	66.050	1.00	8.01
35	ATOM	1820	HH11	ARG	190	-23.143	-3.001	65.758	1.00	0.00
	ATOM	1821	HH12	ARG	190	-23.970	-1.501	66.030	1.00	0.00
	ATOM	1822	NH2	ARG	190	-21.975	-0.220	66.799	1.00	11.12
	ATOM	1823	HH21	ARG	190	-21.118	0.212	67.080	1.00	0.00
	ATOM	1824	HH22	ARG	190	-22.814	0.312	66.777	1.00	0.00

	ATOM	1825	C	ARG	190	-20.996	-4.977	61.789	1.00	12.50
	ATOM	1826	O	ARG	190	-21.172	-3.826	61.380	1.00	14.16
	ATOM	1827	N	PRO	191	-21.785	-5.991	61.416	1.00	14.16
	ATOM	1828	CD	PRO	191	-21.581	-7.440	61.603	1.00	14.81
5	ATOM	1829	CA	PRO	191	-22.960	-5.721	60.587	1.00	14.23
	ATOM	1830	CB	PRO	191	-23.281	-7.094	60.004	1.00	15.24
	ATOM	1831	CG	PRO	191	-22.890	-8.023	61.119	1.00	16.17
	ATOM	1832	C	PRO	191	-24.081	-5.222	61.500	1.00	14.24
	ATOM	1833	O	PRO	191	-24.039	-5.444	62.712	1.00	15.68
10	ATOM	1834	N	ARG	192	-25.036	-4.492	60.937	1.00	15.51
	ATOM	1835	H	ARG	192	-25.006	-4.277	59.982	1.00	0.00
	ATOM	1836	CA	ARG	192	-26.164	-3.988	61.712	1.00	18.28
	ATOM	1837	CB	ARG	192	-26.369	-2.489	61.458	1.00	13.36
	ATOM	1838	CG	ARG	192	-25.210	-1.623	61.914	1.00	11.77
15	ATOM	1839	CD	ARG	192	-25.445	-0.158	61.606	1.00	12.79
	ATOM	1840	NE	ARG	192	-26.554	0.404	62.374	1.00	13.77
	ATOM	1841	HE	ARG	192	-26.455	0.472	63.346	1.00	0.00
	ATOM	1842	CZ	ARG	192	-27.707	0.809	61.849	1.00	15.28
	ATOM	1843	NH1	ARG	192	-27.925	0.718	60.544	1.00	14.55
20	ATOM	1844	HH11	ARG	192	-27.221	0.344	59.941	1.00	0.00
	ATOM	1845	HH12	ARG	192	-28.799	1.013	60.162	1.00	0.00
	ATOM	1846	NH2	ARG	192	-28.643	1.322	62.631	1.00	16.15
	ATOM	1847	HH21	ARG	192	-28.468	1.402	63.611	1.00	0.00
	ATOM	1848	HH22	ARG	192	-29.515	1.625	62.246	1.00	0.00
25	ATOM	1849	C	ARG	192	-27.406	-4.779	61.311	1.00	20.44
	ATOM	1850	O	ARG	192	-27.345	-5.612	60.404	1.00	21.80
	ATOM	1851	N	LYS	193	-28.523	-4.532	61.988	1.00	26.86
	ATOM	1852	H	LYS	193	-28.484	-3.869	62.709	1.00	0.00
	ATOM	1853	CA	LYS	193	-29.773	-5.232	61.690	1.00	30.35
30	ATOM	1854	CB	LYS	193	-30.876	-4.793	62.654	1.00	34.92
	ATOM	1855	CG	LYS	193	-30.577	-5.067	64.117	1.00	42.06
	ATOM	1856	CD	LYS	193	-31.765	-4.694	64.990	1.00	48.13
	ATOM	1857	CE	LYS	193	-31.490	-4.992	66.457	1.00	52.32
	ATOM	1858	NZ	LYS	193	-32.702	-4.794	67.307	1.00	53.88
35	ATOM	1859	HZ1	LYS	193	-33.436	-5.457	66.987	1.00	0.00
	ATOM	1860	HZ2	LYS	193	-33.047	-3.819	67.206	1.00	0.00
	ATOM	1861	HZ3	LYS	193	-32.473	-4.984	68.304	1.00	0.00
	ATOM	1862	C	LYS	193	-30.226	-5.004	60.246	1.00	32.33
	ATOM	1863	O	LYS	193	-30.611	-5.950	59.557	1.00	33.07

	ATOM	1864	N	GLU	194	-30.176	-3.751	59.795	1.00	31.89
	ATOM	1865	H	GLU	194	-29.824	-3.055	60.377	1.00	0.00
	ATOM	1866	CA	GLU	194	-30.575	-3.401	58.430	1.00	31.91
	ATOM	1867	CB	GLU	194	-30.744	-1.884	58.274	1.00	32.74
5	ATOM	1868	CG	GLU	194	-32.021	-1.301	58.861	1.00	35.26
	ATOM	1869	CD	GLU	194	-32.036	-1.294	60.376	1.00	36.36
	ATOM	1870	OE1	GLU	194	-32.968	-1.885	60.956	1.00	40.45
	ATOM	1871	OE2	GLU	194	-31.128	-0.694	60.989	1.00	38.26
	ATOM	1872	C	GLU	194	-29.541	-3.882	57.424	1.00	30.11
10	ATOM	1873	O	GLU	194	-28.362	-3.556	57.536	1.00	31.42
	ATOM	1874	N	GLN	195	-29.986	-4.651	56.438	1.00	30.67
	ATOM	1875	H	GLN	195	-30.939	-4.860	56.409	1.00	0.00
	ATOM	1876	CA	GLN	195	-29.097	-5.168	55.405	1.00	30.73
	ATOM	1877	CB	GLN	195	-29.866	-6.090	54.460	1.00	37.53
15	ATOM	1878	CG	GLN	195	-30.238	-7.431	55.070	1.00	48.32
	ATOM	1879	CD	GLN	195	-29.120	-8.457	54.969	1.00	54.80
	ATOM	1880	OE1	GLN	195	-29.252	-9.457	54.264	1.00	59.01
	ATOM	1881	NE2	GLN	195	-28.016	-8.216	55.669	1.00	57.50
	ATOM	1882	HE21	GLN	195	-27.917	-7.416	56.226	1.00	0.00
20	ATOM	1883	HE22	GLN	195	-27.317	-8.894	55.589	1.00	0.00
	ATOM	1884	C	GLN	195	-28.477	-4.024	54.617	1.00	27.43
	ATOM	1885	O	GLN	195	-29.171	-3.094	54.209	1.00	26.89
	ATOM	1886	N	GLY	196	-27.170	-4.095	54.410	1.00	24.53
	ATOM	1887	H	GLY	196	-26.647	-4.854	54.751	1.00	0.00
25	ATOM	1888	CA	GLY	196	-26.491	-3.050	53.672	1.00	23.48
	ATOM	1889	C	GLY	196	-25.943	-1.969	54.579	1.00	22.43
	ATOM	1890	O	GLY	196	-25.454	-0.946	54.094	1.00	21.55
	ATOM	1891	N	THR	197	-26.067	-2.166	55.891	1.00	19.48
	ATOM	1892	H	THR	197	-26.503	-2.975	56.238	1.00	0.00
30	ATOM	1893	CA	THR	197	-25.548	-1.203	56.852	1.00	17.30
	ATOM	1894	CB	THR	197	-26.665	-0.454	57.610	1.00	18.42
	ATOM	1895	OG1	THR	197	-27.334	-1.352	58.501	1.00	18.98
	ATOM	1896	HG1	THR	197	-27.449	-2.142	57.983	1.00	0.00
	ATOM	1897	CG2	THR	197	-27.667	0.147	56.635	1.00	17.56
35	ATOM	1898	C	THR	197	-24.652	-1.933	57.841	1.00	16.36
	ATOM	1899	O	THR	197	-24.952	-3.057	58.261	1.00	16.10
	ATOM	1900	N	TYR	198	-23.539	-1.294	58.178	1.00	13.90
	ATOM	1901	H	TYR	198	-23.392	-0.390	57.840	1.00	0.00
	ATOM	1902	CA	TYR	198	-22.542	-1.834	59.092	1.00	13.70

	ATOM	1903	CB	TYR	198	-21.324	-2.317	58.302	1.00	15.79
	ATOM	1904	CG	TYR	198	-21.644	-3.336	57.239	1.00	16.67
	ATOM	1905	CD1	TYR	198	-22.117	-2.941	55.988	1.00	16.60
	ATOM	1906	CE1	TYR	198	-22.441	-3.876	55.016	1.00	18.00
5	ATOM	1907	CD2	TYR	198	-21.498	-4.699	57.490	1.00	17.21
	ATOM	1908	CE2	TYR	198	-21.817	-5.643	56.525	1.00	20.80
	ATOM	1909	CZ	TYR	198	-22.289	-5.226	55.290	1.00	20.28
	ATOM	1910	OH	TYR	198	-22.612	-6.159	54.330	1.00	23.06
	ATOM	1911	HH	TYR	198	-22.386	-7.044	54.647	1.00	0.00
10	ATOM	1912	C	TYR	198	-22.101	-0.708	60.006	1.00	12.46
	ATOM	1913	O	TYR	198	-22.450	0.448	59.783	1.00	15.43
	ATOM	1914	N	ALA	199	-21.317	-1.033	61.019	1.00	12.73
	ATOM	1915	H	ALA	199	-21.033	-1.954	61.164	1.00	0.00
	ATOM	1916	CA	ALA	199	-20.833	-0.012	61.927	1.00	10.15
15	ATOM	1917	CB	ALA	199	-21.628	-0.023	63.221	1.00	11.67
	ATOM	1918	C	ALA	199	-19.363	-0.225	62.210	1.00	11.06
	ATOM	1919	O	ALA	199	-18.900	-1.361	62.357	1.00	11.49
	ATOM	1920	N	LEU	200	-18.624	0.876	62.204	1.00	10.36
	ATOM	1921	H	LEU	200	-19.053	1.732	62.000	1.00	0.00
20	ATOM	1922	CA	LEU	200	-17.206	0.870	62.492	1.00	9.26
	ATOM	1923	CB	LEU	200	-16.483	1.830	61.550	1.00	12.13
	ATOM	1924	CG	LEU	200	-15.092	1.470	61.028	1.00	17.52
	ATOM	1925	CD1	LEU	200	-14.463	2.731	60.451	1.00	19.60
	ATOM	1926	CD2	LEU	200	-14.204	0.905	62.129	1.00	20.00
25	ATOM	1927	C	LEU	200	-17.122	1.389	63.927	1.00	10.58
	ATOM	1928	O	LEU	200	-17.605	2.483	64.225	1.00	11.51
	ATOM	1929	N	SER	201	-16.590	0.577	64.829	1.00	10.65
	ATOM	1930	H	SER	201	-16.248	-0.304	64.561	1.00	0.00
	ATOM	1931	CA	SER	201	-16.465	0.972	66.223	1.00	11.10
30	ATOM	1932	CB	SER	201	-17.216	-0.016	67.121	1.00	11.49
	ATOM	1933	OG	SER	201	-18.576	-0.156	66.728	1.00	13.41
	ATOM	1934	HG	SER	201	-18.554	-0.583	65.856	1.00	0.00
	ATOM	1935	C	SER	201	-14.998	1.007	66.610	1.00	13.09
	ATOM	1936	O	SER	201	-14.274	0.031	66.405	1.00	15.42
35	ATOM	1937	N	LEU	202	-14.538	2.145	67.112	1.00	13.25
	ATOM	1938	H	LEU	202	-15.116	2.931	67.224	1.00	0.00
	ATOM	1939	CA	LEU	202	-13.155	2.258	67.535	1.00	14.15
	ATOM	1940	CB	LEU	202	-12.259	2.865	66.439	1.00	16.72
	ATOM	1941	CG	LEU	202	-12.277	4.272	65.816	1.00	18.51

	ATOM	1942	CD1	LEU	202	-13.589	4.533	65.121	1.00	18.26
	ATOM	1943	CD2	LEU	202	-11.956	5.347	66.840	1.00	21.05
	ATOM	1944	C	LEU	202	-13.054	3.024	68.843	1.00	15.33
	ATOM	1945	O	LEU	202	-13.968	3.753	69.224	1.00	14.20
5	ATOM	1946	N	ILE	203	-11.973	2.796	69.567	1.00	18.07
	ATOM	1947	H	ILE	203	-11.290	2.170	69.241	1.00	0.00
	ATOM	1948	CA	ILE	203	-11.777	3.470	70.835	1.00	19.49
	ATOM	1949	CB	ILE	203	-11.514	2.444	71.974	1.00	18.21
	ATOM	1950	CG2	ILE	203	-10.279	1.623	71.687	1.00	21.96
10	ATOM	1951	CG1	ILE	203	-11.419	3.146	73.326	1.00	21.52
	ATOM	1952	CD	ILE	203	-11.469	2.190	74.496	1.00	21.43
	ATOM	1953	C	ILE	203	-10.669	4.517	70.703	1.00	20.13
	ATOM	1954	O	ILE	203	-9.645	4.288	70.048	1.00	20.26
	ATOM	1955	N	TYR	204	-10.940	5.707	71.226	1.00	20.23
15	ATOM	1956	H	TYR	204	-11.801	5.874	71.657	1.00	0.00
	ATOM	1957	CA	TYR	204	-9.997	6.809	71.186	1.00	21.84
	ATOM	1958	CB	TYR	204	-10.257	7.691	69.960	1.00	23.09
	ATOM	1959	CG	TYR	204	-9.371	8.909	69.903	1.00	28.63
	ATOM	1960	CD1	TYR	204	-7.983	8.783	69.891	1.00	31.65
20	ATOM	1961	CE1	TYR	204	-7.160	9.905	69.885	1.00	35.44
	ATOM	1962	CD2	TYR	204	-9.917	10.189	69.901	1.00	31.96
	ATOM	1963	CE2	TYR	204	-9.102	11.320	69.894	1.00	36.73
	ATOM	1964	CZ	TYR	204	-7.726	11.171	69.887	1.00	37.11
	ATOM	1965	OH	TYR	204	-6.915	12.283	69.889	1.00	43.01
25	ATOM	1966	HH	TYR	204	-7.453	13.075	69.817	1.00	0.00
	ATOM	1967	C	TYR	204	-10.164	7.618	72.465	1.00	21.93
	ATOM	1968	O	TYR	204	-11.271	8.048	72.792	1.00	20.87
	ATOM	1969	N	GLY	205	-9.069	7.796	73.199	1.00	22.69
	ATOM	1970	H	GLY	205	-8.223	7.424	72.920	1.00	0.00
30	ATOM	1971	CA	GLY	205	-9.117	8.540	74.446	1.00	23.60
	ATOM	1972	C	GLY	205	-10.061	7.891	75.442	1.00	23.74
	ATOM	1973	O	GLY	205	-10.865	8.572	76.075	1.00	26.62
	ATOM	1974	N	LYS	206	-9.993	6.565	75.533	1.00	22.74
	ATOM	1975	H	LYS	206	-9.361	6.092	74.946	1.00	0.00
35	ATOM	1976	CA	LYS	206	-10.834	5.784	76.437	1.00	22.71
	ATOM	1977	CB	LYS	206	-10.498	6.085	77.900	1.00	26.75
	ATOM	1978	CG	LYS	206	-9.177	5.500	78.359	1.00	34.97
	ATOM	1979	CD	LYS	206	-9.136	5.336	79.874	1.00	40.88
	ATOM	1980	CE	LYS	206	-7.962	4.464	80.300	1.00	45.58

	ATOM	1981	NZ	LYS	206	-7.989	4.126	81.753	1.00	48.73
	ATOM	1982	HZ1	LYS	206	-8.863	3.613	81.978	1.00	0.00
	ATOM	1983	HZ2	LYS	206	-7.937	4.997	82.313	1.00	0.00
	ATOM	1984	HZ3	LYS	206	-7.170	3.524	81.979	1.00	0.00
5	ATOM	1985	C	LYS	206	-12.326	5.963	76.195	1.00	21.73
	ATOM	1986	O	LYS	206	-13.132	5.757	77.093	1.00	21.98
	ATOM	1987	N	THR	207	-12.685	6.330	74.972	1.00	20.32
	ATOM	1988	H	THR	207	-12.028	6.508	74.270	1.00	0.00
	ATOM	1989	CA	THR	207	-14.079	6.524	74.604	1.00	21.18
10	ATOM	1990	CB	THR	207	-14.401	8.020	74.393	1.00	23.74
	ATOM	1991	OG1	THR	207	-13.997	8.769	75.547	1.00	30.73
	ATOM	1992	HG1	THR	207	-13.029	8.728	75.573	1.00	0.00
	ATOM	1993	CG2	THR	207	-15.888	8.214	74.174	1.00	26.96
	ATOM	1994	C	THR	207	-14.309	5.776	73.296	1.00	17.81
15	ATOM	1995	O	THR	207	-13.429	5.741	72.443	1.00	17.93
	ATOM	1996	N	VAL	208	-15.469	5.151	73.150	1.00	18.45
	ATOM	1997	H	VAL	208	-16.138	5.204	73.866	1.00	0.00
	ATOM	1998	CA	VAL	208	-15.776	4.406	71.935	1.00	17.67
	ATOM	1999	CB	VAL	208	-16.454	3.040	72.245	1.00	17.07
20	ATOM	2000	CG1	VAL	208	-16.790	2.305	70.950	1.00	16.77
	ATOM	2001	CG2	VAL	208	-15.539	2.182	73.095	1.00	11.55
	ATOM	2002	C	VAL	208	-16.656	5.205	70.983	1.00	18.54
	ATOM	2003	O	VAL	208	-17.696	5.741	71.377	1.00	17.58
	ATOM	2004	N	TYR	209	-16.216	5.276	69.730	1.00	18.01
25	ATOM	2005	H	TYR	209	-15.380	4.834	69.510	1.00	0.00
	ATOM	2006	CA	TYR	209	-16.923	5.978	68.666	1.00	16.80
	ATOM	2007	CB	TYR	209	-15.953	6.871	67.888	1.00	15.72
	ATOM	2008	CG	TYR	209	-15.356	7.983	68.715	1.00	19.87
	ATOM	2009	CD1	TYR	209	-15.781	9.298	68.551	1.00	22.52
30	ATOM	2010	CE1	TYR	209	-15.260	10.324	69.329	1.00	24.59
	ATOM	2011	CD2	TYR	209	-14.387	7.721	69.679	1.00	18.42
	ATOM	2012	CE2	TYR	209	-13.860	8.741	70.462	1.00	21.29
	ATOM	2013	CZ	TYR	209	-14.302	10.037	70.282	1.00	23.10
	ATOM	2014	OH	TYR	209	-13.798	11.052	71.058	1.00	27.37
35	ATOM	2015	HH	TYR	209	-14.236	11.878	70.826	1.00	0.00
	ATOM	2016	C	TYR	209	-17.522	4.945	67.719	1.00	14.63
	ATOM	2017	O	TYR	209	-16.941	3.882	67.505	1.00	14.50
	ATOM	2018	N	HIS	210	-18.706	5.238	67.195	1.00	13.02
	ATOM	2019	H	HIS	210	-19.145	6.068	67.452	1.00	0.00

	ATOM	2020	CA	HIS	210	-19.378	4.345	66.259	1.00	12.53
	ATOM	2021	CB	HIS	210	-20.662	3.786	66.864	1.00	12.65
	ATOM	2022	CG	HIS	210	-20.459	3.040	68.144	1.00	16.12
	ATOM	2023	CD2	HIS	210	-20.531	3.447	69.432	1.00	14.44
5	ATOM	2024	ND1	HIS	210	-20.151	1.697	68.182	1.00	14.83
	ATOM	2025	HD1	HIS	210	-19.968	1.099	67.418	1.00	0.00
	ATOM	2026	CE1	HIS	210	-20.047	1.309	69.440	1.00	15.80
	ATOM	2027	NE2	HIS	210	-20.271	2.352	70.217	1.00	14.45
	ATOM	2028	HE2	HIS	210	-20.186	2.357	71.186	1.00	0.00
10	ATOM	2029	C	HIS	210	-19.734	5.160	65.031	1.00	13.68
	ATOM	2030	O	HIS	210	-20.289	6.249	65.161	1.00	15.52
	ATOM	2031	N	TYR	211	-19.363	4.664	63.853	1.00	13.00
	ATOM	2032	H	TYR	211	-18.867	3.819	63.799	1.00	0.00
	ATOM	2033	CA	TYR	211	-19.658	5.333	62.590	1.00	10.84
15	ATOM	2034	CB	TYR	211	-18.379	5.684	61.835	1.00	10.80
	ATOM	2035	CG	TYR	211	-17.516	6.699	62.535	1.00	12.06
	ATOM	2036	CD1	TYR	211	-16.582	6.304	63.492	1.00	13.54
	ATOM	2037	CE1	TYR	211	-15.788	7.231	64.144	1.00	15.10
	ATOM	2038	CD2	TYR	211	-17.631	8.056	62.247	1.00	13.72
20	ATOM	2039	CE2	TYR	211	-16.835	8.997	62.896	1.00	13.35
	ATOM	2040	CZ	TYR	211	-15.919	8.575	63.843	1.00	15.06
	ATOM	2041	OH	TYR	211	-15.127	9.487	64.494	1.00	16.21
	ATOM	2042	HH	TYR	211	-14.660	9.055	65.212	1.00	0.00
	ATOM	2043	C	TYR	211	-20.486	4.397	61.743	1.00	11.32
25	ATOM	2044	O	TYR	211	-20.200	3.199	61.667	1.00	11.69
	ATOM	2045	N	LEU	212	-21.511	4.950	61.114	1.00	9.85
	ATOM	2046	H	LEU	212	-21.636	5.919	61.180	1.00	0.00
	ATOM	2047	CA	LEU	212	-22.415	4.194	60.266	1.00	11.52
	ATOM	2048	CB	LEU	212	-23.775	4.912	60.217	1.00	11.56
30	ATOM	2049	CG	LEU	212	-25.035	4.391	59.503	1.00	15.30
	ATOM	2050	CD1	LEU	212	-25.117	4.895	58.086	1.00	16.57
	ATOM	2051	CD2	LEU	212	-25.126	2.883	59.563	1.00	13.66
	ATOM	2052	C	LEU	212	-21.830	4.050	58.863	1.00	12.35
	ATOM	2053	O	LEU	212	-21.269	4.996	58.319	1.00	11.11
35	ATOM	2054	N	ILE	213	-21.906	2.842	58.317	1.00	11.83
	ATOM	2055	H	ILE	213	-22.310	2.108	58.828	1.00	0.00
	ATOM	2056	CA	ILE	213	-21.431	2.564	56.968	1.00	11.63
	ATOM	2057	CB	ILE	213	-20.299	1.504	56.954	1.00	12.05
	ATOM	2058	CG2	ILE	213	-19.934	1.142	55.505	1.00	9.05

	ATOM	2059	CG1	ILE	213	-19.070	2.022	57.704	1.00	10.26
	ATOM	2060	CD	ILE	213	-17.985	0.988	57.897	1.00	9.92
	ATOM	2061	C	ILE	213	-22.626	1.997	56.209	1.00	12.13
	ATOM	2062	O	ILE	213	-23.269	1.063	56.685	1.00	13.61
5	ATOM	2063	N	SER	214	-22.970	2.592	55.073	1.00	12.35
	ATOM	2064	H	SER	214	-22.502	3.387	54.736	1.00	0.00
	ATOM	2065	CA	SER	214	-24.084	2.091	54.279	1.00	16.58
	ATOM	2066	CB	SER	214	-25.328	2.965	54.462	1.00	20.18
	ATOM	2067	OG	SER	214	-25.052	4.321	54.167	1.00	28.58
10	ATOM	2068	HG	SER	214	-25.884	4.781	54.279	1.00	0.00
	ATOM	2069	C	SER	214	-23.683	2.063	52.817	1.00	17.82
	ATOM	2070	O	SER	214	-22.747	2.753	52.413	1.00	17.93
	ATOM	2071	N	GLN	215	-24.331	1.218	52.028	1.00	20.77
	ATOM	2072	H	GLN	215	-25.045	0.650	52.395	1.00	0.00
15	ATOM	2073	CA	GLN	215	-23.995	1.175	50.620	1.00	25.66
	ATOM	2074	CB	GLN	215	-23.692	-0.247	50.140	1.00	28.54
	ATOM	2075	CG	GLN	215	-24.821	-1.247	50.204	1.00	32.61
	ATOM	2076	CD	GLN	215	-24.390	-2.603	49.665	1.00	34.57
	ATOM	2077	OE1	GLN	215	-24.663	-3.638	50.270	1.00	38.97
20	ATOM	2078	NE2	GLN	215	-23.684	-2.599	48.539	1.00	32.79
	ATOM	2079	HE21	GLN	215	-23.457	-1.751	48.109	1.00	0.00
	ATOM	2080	HE22	GLN	215	-23.416	-3.468	48.179	1.00	0.00
	ATOM	2081	C	GLN	215	-25.063	1.853	49.784	1.00	26.76
	ATOM	2082	O	GLN	215	-26.257	1.704	50.042	1.00	27.55
25	ATOM	2083	N	ASP	216	-24.621	2.676	48.840	1.00	27.69
	ATOM	2084	H	ASP	216	-23.650	2.786	48.753	1.00	0.00
	ATOM	2085	CA	ASP	216	-25.536	3.407	47.977	1.00	28.52
	ATOM	2086	CB	ASP	216	-24.862	4.672	47.417	1.00	27.76
	ATOM	2087	CG	ASP	216	-23.572	4.381	46.642	1.00	26.36
30	ATOM	2088	OD1	ASP	216	-23.455	3.317	46.003	1.00	26.80
	ATOM	2089	OD2	ASP	216	-22.670	5.242	46.654	1.00	26.55
	ATOM	2090	C	ASP	216	-26.111	2.558	46.851	1.00	30.65
	ATOM	2091	O	ASP	216	-25.818	1.367	46.745	1.00	29.83
	ATOM	2092	N	LYS	217	-26.910	3.196	46.001	1.00	35.42
35	ATOM	2093	H	LYS	217	-27.102	4.124	46.214	1.00	0.00
	ATOM	2094	CA	LYS	217	-27.538	2.543	44.857	1.00	38.73
	ATOM	2095	CB	LYS	217	-28.406	3.540	44.074	1.00	42.89
	ATOM	2096	CG	LYS	217	-27.645	4.721	43.478	1.00	48.87
	ATOM	2097	CD	LYS	217	-27.269	5.752	44.537	1.00	53.40

	ATOM	2098	CE	LYS	217	-26.291	6.785	43.996	1.00	58.31
	ATOM	2099	NZ	LYS	217	-24.979	6.187	43.601	1.00	59.73
	ATOM	2100	HZ1	LYS	217	-25.131	5.461	42.871	1.00	0.00
	ATOM	2101	HZ2	LYS	217	-24.529	5.743	44.426	1.00	0.00
5	ATOM	2102	HZ3	LYS	217	-24.352	6.930	43.224	1.00	0.00
	ATOM	2103	C	LYS	217	-26.502	1.913	43.925	1.00	38.15
	ATOM	2104	O	LYS	217	-26.749	0.865	43.328	1.00	40.41
	ATOM	2105	N	ALA	218	-25.340	2.552	43.814	1.00	35.55
	ATOM	2106	H	ALA	218	-25.215	3.381	44.311	1.00	0.00
10	ATOM	2107	CA	ALA	218	-24.265	2.052	42.959	1.00	33.42
	ATOM	2108	CB	ALA	218	-23.274	3.168	42.659	1.00	33.11
	ATOM	2109	C	ALA	218	-23.535	0.850	43.563	1.00	31.29
	ATOM	2110	O	ALA	218	-22.651	0.274	42.928	1.00	32.67
	ATOM	2111	N	GLY	219	-23.891	0.490	44.794	1.00	28.81
15	ATOM	2112	H	GLY	219	-24.622	0.946	45.252	1.00	0.00
	ATOM	2113	CA	GLY	219	-23.253	-0.633	45.461	1.00	25.16
	ATOM	2114	C	GLY	219	-21.997	-0.266	46.235	1.00	21.96
	ATOM	2115	O	GLY	219	-21.363	-1.132	46.841	1.00	21.31
	ATOM	2116	N	LYS	220	-21.642	1.015	46.223	1.00	18.93
20	ATOM	2117	H	LYS	220	-22.183	1.645	45.717	1.00	0.00
	ATOM	2118	CA	LYS	220	-20.465	1.499	46.929	1.00	17.78
	ATOM	2119	CB	LYS	220	-19.940	2.767	46.266	1.00	20.25
	ATOM	2120	CG	LYS	220	-19.307	2.495	44.913	1.00	24.18
	ATOM	2121	CD	LYS	220	-18.898	3.771	44.211	1.00	31.09
25	ATOM	2122	CE	LYS	220	-18.088	3.470	42.960	1.00	34.60
	ATOM	2123	NZ	LYS	220	-18.821	2.569	42.026	1.00	37.47
	ATOM	2124	HZ1	LYS	220	-19.718	3.013	41.752	1.00	0.00
	ATOM	2125	HZ2	LYS	220	-19.017	1.663	42.495	1.00	0.00
	ATOM	2126	HZ3	LYS	220	-18.261	2.395	41.170	1.00	0.00
30	ATOM	2127	C	LYS	220	-20.746	1.743	48.407	1.00	16.48
	ATOM	2128	O	LYS	220	-21.865	2.094	48.780	1.00	17.93
	ATOM	2129	N	TYR	221	-19.728	1.535	49.236	1.00	12.90
	ATOM	2130	H	TYR	221	-18.873	1.259	48.858	1.00	0.00
	ATOM	2131	CA	TYR	221	-19.837	1.709	50.680	1.00	13.00
35	ATOM	2132	CB	TYR	221	-19.086	0.593	51.414	1.00	14.73
	ATOM	2133	CG	TYR	221	-19.541	-0.805	51.080	1.00	14.94
	ATOM	2134	CD1	TYR	221	-19.019	-1.481	49.982	1.00	14.31
	ATOM	2135	CE1	TYR	221	-19.413	-2.779	49.682	1.00	17.85
	ATOM	2136	CD2	TYR	221	-20.479	-1.464	51.876	1.00	18.01

	ATOM	2137	CE2	TYR	221	-20.881	-2.769	51.583	1.00	19.06
	ATOM	2138	CZ	TYR	221	-20.339	-3.418	50.483	1.00	18.46
	ATOM	2139	OH	TYR	221	-20.710	-4.712	50.187	1.00	21.74
	ATOM	2140	HH	TYR	221	-21.440	-4.960	50.769	1.00	0.00
5	ATOM	2141	C	TYR	221	-19.239	3.026	51.127	1.00	13.74
	ATOM	2142	O	TYR	221	-18.268	3.505	50.537	1.00	13.39
	ATOM	2143	N	CYS	222	-19.792	3.588	52.196	1.00	12.18
	ATOM	2144	H	CYS	222	-20.597	3.211	52.622	1.00	0.00
	ATOM	2145	CA	CYS	222	-19.270	4.832	52.738	1.00	12.71
10	ATOM	2146	CB	CYS	222	-19.460	5.988	51.746	1.00	12.80
	ATOM	2147	SG	CYS	222	-21.164	6.569	51.564	1.00	18.19
	ATOM	2148	C	CYS	222	-19.924	5.225	54.042	1.00	11.87
	ATOM	2149	O	CYS	222	-21.011	4.751	54.382	1.00	13.51
	ATOM	2150	N	ILE	223	-19.194	6.019	54.814	1.00	11.88
15	ATOM	2151	H	ILE	223	-18.278	6.244	54.535	1.00	0.00
	ATOM	2152	CA	ILE	223	-19.709	6.588	56.049	1.00	11.29
	ATOM	2153	CB	ILE	223	-18.542	7.030	56.971	1.00	10.12
	ATOM	2154	CG2	ILE	223	-19.073	7.735	58.217	1.00	9.33
	ATOM	2155	CG1	ILE	223	-17.712	5.801	57.366	1.00	10.22
20	ATOM	2156	CD	ILE	223	-16.409	6.116	58.065	1.00	12.74
	ATOM	2157	C	ILE	223	-20.409	7.805	55.418	1.00	13.19
	ATOM	2158	O	ILE	223	-19.883	8.380	54.461	1.00	14.19
	ATOM	2159	N	PRO	224	-21.627	8.158	55.864	1.00	13.86
	ATOM	2160	CD	PRO	224	-22.436	7.580	56.951	1.00	15.81
25	ATOM	2161	CA	PRO	224	-22.313	9.314	55.269	1.00	14.75
	ATOM	2162	CB	PRO	224	-23.430	9.593	56.271	1.00	15.29
	ATOM	2163	CG	PRO	224	-23.798	8.225	56.718	1.00	16.55
	ATOM	2164	C	PRO	224	-21.418	10.538	55.052	1.00	13.87
	ATOM	2165	O	PRO	224	-20.737	10.999	55.972	1.00	14.06
30	ATOM	2166	N	GLU	225	-21.406	11.024	53.812	1.00	16.66
	ATOM	2167	H	GLU	225	-21.973	10.588	53.143	1.00	0.00
	ATOM	2168	CA	GLU	225	-20.611	12.184	53.399	1.00	18.98
	ATOM	2169	CB	GLU	225	-20.880	13.377	54.321	1.00	23.00
	ATOM	2170	CG	GLU	225	-22.332	13.822	54.340	1.00	31.63
35	ATOM	2171	CD	GLU	225	-22.586	14.925	55.345	1.00	38.26
	ATOM	2172	OE1	GLU	225	-22.900	14.610	56.514	1.00	44.60
	ATOM	2173	OE2	GLU	225	-22.472	16.111	54.965	1.00	44.04
	ATOM	2174	C	GLU	225	-19.109	11.901	53.325	1.00	17.01
	ATOM	2175	O	GLU	225	-18.297	12.827	53.247	1.00	17.14

	ATOM	2176	N	GLY	226	-18.745	10.623	53.308	1.00	14.45
	ATOM	2177	H	GLY	226	-19.411	9.908	53.330	1.00	0.00
	ATOM	2178	CA	GLY	226	-17.347	10.255	53.244	1.00	11.18
	ATOM	2179	C	GLY	226	-16.950	9.659	51.910	1.00	10.31
5	ATOM	2180	O	GLY	226	-17.741	9.618	50.969	1.00	9.78
	ATOM	2181	N	THR	227	-15.713	9.189	51.843	1.00	12.43
	ATOM	2182	H	THR	227	-15.132	9.231	52.635	1.00	0.00
	ATOM	2183	CA	THR	227	-15.161	8.580	50.642	1.00	13.92
	ATOM	2184	CB	THR	227	-13.660	8.259	50.845	1.00	13.92
10	ATOM	2185	OG1	THR	227	-12.995	9.405	51.387	1.00	14.17
	ATOM	2186	HG1	THR	227	-12.972	10.110	50.731	1.00	0.00
	ATOM	2187	CG2	THR	227	-13.004	7.903	49.531	1.00	13.18
	ATOM	2188	C	THR	227	-15.907	7.288	50.339	1.00	13.19
	ATOM	2189	O	THR	227	-16.348	6.600	51.256	1.00	15.61
15	ATOM	2190	N	LYS	228	-16.064	6.968	49.061	1.00	12.19
	ATOM	2191	H	LYS	228	-15.734	7.560	48.345	1.00	0.00
	ATOM	2192	CA	LYS	228	-16.751	5.746	48.676	1.00	14.24
	ATOM	2193	CB	LYS	228	-17.773	6.035	47.582	1.00	17.80
	ATOM	2194	CG	LYS	228	-18.879	6.939	48.084	1.00	18.53
20	ATOM	2195	CD	LYS	228	-19.925	7.208	47.046	1.00	24.24
	ATOM	2196	CE	LYS	228	-21.091	7.919	47.693	1.00	25.57
	ATOM	2197	NZ	LYS	228	-21.680	7.085	48.782	1.00	26.31
	ATOM	2198	HZ1	LYS	228	-20.949	6.908	49.499	1.00	0.00
	ATOM	2199	HZ2	LYS	228	-22.012	6.178	48.395	1.00	0.00
25	ATOM	2200	HZ3	LYS	228	-22.481	7.585	49.217	1.00	0.00
	ATOM	2201	C	LYS	228	-15.765	4.663	48.258	1.00	14.50
	ATOM	2202	O	LYS	228	-14.730	4.948	47.650	1.00	13.50
	ATOM	2203	N	PHE	229	-16.093	3.424	48.612	1.00	11.73
	ATOM	2204	H	PHE	229	-16.935	3.271	49.091	1.00	0.00
30	ATOM	2205	CA	PHE	229	-15.256	2.266	48.331	1.00	11.12
	ATOM	2206	CB	PHE	229	-14.666	1.726	49.633	1.00	10.16
	ATOM	2207	CG	PHE	229	-13.962	2.761	50.453	1.00	10.70
	ATOM	2208	CD1	PHE	229	-14.669	3.545	51.364	1.00	10.54
	ATOM	2209	CD2	PHE	229	-12.596	2.969	50.309	1.00	9.61
35	ATOM	2210	CE1	PHE	229	-14.026	4.516	52.112	1.00	9.20
	ATOM	2211	CE2	PHE	229	-11.944	3.940	51.057	1.00	9.06
	ATOM	2212	CZ	PHE	229	-12.657	4.715	51.959	1.00	9.11
	ATOM	2213	C	PHE	229	-16.083	1.168	47.688	1.00	12.28
	ATOM	2214	O	PHE	229	-17.298	1.086	47.908	1.00	10.19

	ATOM	2215	N	ASP	230	-15.426	0.325	46.898	1.00	10.90
	ATOM	2216	H	ASP	230	-14.463	0.469	46.747	1.00	0.00
	ATOM	2217	CA	ASP	230	-16.105	-0.786	46.233	1.00	12.50
	ATOM	2218	CB	ASP	230	-15.298	-1.275	45.027	1.00	11.22
5	ATOM	2219	CG	ASP	230	-15.537	-0.441	43.784	1.00	14.98
	ATOM	2220	OD1	ASP	230	-14.994	-0.805	42.725	1.00	16.87
	ATOM	2221	OD2	ASP	230	-16.267	0.569	43.852	1.00	18.88
	ATOM	2222	C	ASP	230	-16.353	-1.947	47.185	1.00	10.65
	ATOM	2223	O	ASP	230	-17.276	-2.736	46.984	1.00	11.11
10	ATOM	2224	N	THR	231	-15.529	-2.047	48.224	1.00	11.48
	ATOM	2225	H	THR	231	-14.831	-1.374	48.373	1.00	0.00
	ATOM	2226	CA	THR	231	-15.664	-3.120	49.197	1.00	7.69
	ATOM	2227	CB	THR	231	-14.672	-4.283	48.916	1.00	7.51
	ATOM	2228	OG1	THR	231	-13.326	-3.812	49.047	1.00	6.84
15	ATOM	2229	HG1	THR	231	-13.152	-3.283	48.249	1.00	0.00
	ATOM	2230	CG2	THR	231	-14.867	-4.851	47.514	1.00	9.18
	ATOM	2231	C	THR	231	-15.383	-2.611	50.601	1.00	8.28
	ATOM	2232	O	THR	231	-14.786	-1.549	50.787	1.00	6.01
	ATOM	2233	N	LEU	232	-15.803	-3.394	51.587	1.00	11.12
20	ATOM	2234	H	LEU	232	-16.301	-4.202	51.349	1.00	0.00
	ATOM	2235	CA	LEU	232	-15.576	-3.069	52.991	1.00	11.15
	ATOM	2236	CB	LEU	232	-16.452	-3.943	53.890	1.00	10.62
	ATOM	2237	CG	LEU	232	-17.944	-3.612	53.890	1.00	10.59
	ATOM	2238	CD1	LEU	232	-18.702	-4.656	54.692	1.00	9.60
25	ATOM	2239	CD2	LEU	232	-18.163	-2.225	54.474	1.00	9.95
	ATOM	2240	C	LEU	232	-14.106	-3.254	53.355	1.00	10.18
	ATOM	2241	O	LEU	232	-13.591	-2.556	54.224	1.00	10.71
	ATOM	2242	N	TRP	233	-13.433	-4.188	52.682	1.00	7.94
	ATOM	2243	H	TRP	233	-13.899	-4.714	52.004	1.00	0.00
30	ATOM	2244	CA	TRP	233	-12.019	-4.454	52.930	1.00	7.29
	ATOM	2245	CB	TRP	233	-11.547	-5.644	52.082	1.00	6.24
	ATOM	2246	CG	TRP	233	-10.206	-6.191	52.486	1.00	8.76
	ATOM	2247	CD2	TRP	233	-8.918	-5.653	52.152	1.00	10.99
	ATOM	2248	CE2	TRP	233	-7.949	-6.473	52.772	1.00	8.57
35	ATOM	2249	CE3	TRP	233	-8.487	-4.551	51.394	1.00	10.97
	ATOM	2250	CD1	TRP	233	-9.971	-7.291	53.265	1.00	9.24
	ATOM	2251	NE1	TRP	233	-8.619	-7.463	53.441	1.00	9.83
	ATOM	2252	HE1	TRP	233	-8.218	-8.194	53.968	1.00	0.00
	ATOM	2253	CZ2	TRP	233	-6.577	-6.229	52.658	1.00	9.97

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	ATOM	2254	CZ3	TRP	233	-7.120	-4.307	51.281	1.00	9.13
	ATOM	2255	CH2	TRP	233	-6.183	-5.144	51.913	1.00	11.33
	ATOM	2256	C	TRP	233	-11.197	-3.207	52.599	1.00	7.04
	ATOM	2257	O	TRP	233	-10.319	-2.799	53.370	1.00	7.78
5	ATOM	2258	N	GLN	234	-11.503	-2.593	51.461	1.00	8.41
	ATOM	2259	H	GLN	234	-12.219	-2.958	50.896	1.00	0.00
	ATOM	2260	CA	GLN	234	-10.803	-1.388	51.014	1.00	9.39
	ATOM	2261	CB	GLN	234	-11.165	-1.071	49.562	1.00	8.16
	ATOM	2262	CG	GLN	234	-10.565	-2.062	48.559	1.00	10.01
10	ATOM	2263	CD	GLN	234	-11.154	-1.939	47.158	1.00	12.43
	ATOM	2264	OE1	GLN	234	-12.366	-2.054	46.969	1.00	11.45
	ATOM	2265	NE2	GLN	234	-10.292	-1.740	46.168	1.00	12.16
	ATOM	2266	HE21	GLN	234	-9.333	-1.691	46.378	1.00	0.00
	ATOM	2267	HE22	GLN	234	-10.642	-1.644	45.264	1.00	0.00
15	ATOM	2268	C	GLN	234	-11.057	-0.179	51.916	1.00	8.34
	ATOM	2269	O	GLN	234	-10.160	0.632	52.140	1.00	11.19
	ATOM	2270	N	LEU	235	-12.275	-0.065	52.434	1.00	9.44
	ATOM	2271	H	LEU	235	-12.961	-0.717	52.193	1.00	0.00
	ATOM	2272	CA	LEU	235	-12.644	1.025	53.336	1.00	9.31
20	ATOM	2273	CB	LEU	235	-14.137	0.914	53.705	1.00	10.64
	ATOM	2274	CG	LEU	235	-14.799	1.893	54.690	1.00	8.65
	ATOM	2275	CD1	LEU	235	-16.276	2.014	54.359	1.00	12.30
	ATOM	2276	CD2	LEU	235	-14.606	1.444	56.139	1.00	8.88
	ATOM	2277	C	LEU	235	-11.768	0.979	54.592	1.00	10.98
25	ATOM	2278	O	LEU	235	-11.118	1.964	54.949	1.00	10.19
	ATOM	2279	N	VAL	236	-11.726	-0.185	55.232	1.00	11.09
	ATOM	2280	H	VAL	236	-12.243	-0.941	54.873	1.00	0.00
	ATOM	2281	CA	VAL	236	-10.941	-0.372	56.446	1.00	13.11
	ATOM	2282	CB	VAL	236	-11.160	-1.792	57.035	1.00	13.64
30	ATOM	2283	CG1	VAL	236	-10.210	-2.052	58.198	1.00	9.34
	ATOM	2284	CG2	VAL	236	-12.606	-1.937	57.497	1.00	9.82
	ATOM	2285	C	VAL	236	-9.460	-0.122	56.202	1.00	12.74
	ATOM	2286	O	VAL	236	-8.814	0.617	56.947	1.00	12.87
	ATOM	2287	N	GLU	237	-8.936	-0.692	55.124	1.00	11.87
35	ATOM	2288	H	GLU	237	-9.506	-1.255	54.555	1.00	0.00
	ATOM	2289	CA	GLU	237	-7.526	-0.530	54.810	1.00	14.06
	ATOM	2290	CB	GLU	237	-7.131	-1.443	53.654	1.00	18.30
	ATOM	2291	CG	GLU	237	-6.010	-2.409	54.009	1.00	27.57
	ATOM	2292	CD	GLU	237	-6.318	-3.258	55.236	1.00	33.91

	ATOM	2293	OE1	GLU	237	-5.411	-3.405	56.082	1.00	36.05
	ATOM	2294	OE2	GLU	237	-7.452	-3.781	55.356	1.00	36.98
	ATOM	2295	C	GLU	237	-7.140	0.911	54.513	1.00	11.41
	ATOM	2296	O	GLU	237	-6.046	1.347	54.862	1.00	13.53
5	ATOM	2297	N	TYR	238	-8.048	1.651	53.887	1.00	10.99
	ATOM	2298	H	TYR	238	-8.918	1.250	53.660	1.00	0.00
	ATOM	2299	CA	TYR	238	-7.811	3.051	53.547	1.00	10.24
	ATOM	2300	CB	TYR	238	-8.917	3.539	52.616	1.00	8.37
	ATOM	2301	CG	TYR	238	-8.736	4.938	52.070	1.00	9.95
10	ATOM	2302	CD1	TYR	238	-7.971	5.165	50.923	1.00	11.03
	ATOM	2303	CE1	TYR	238	-7.866	6.436	50.371	1.00	11.61
	ATOM	2304	CD2	TYR	238	-9.385	6.023	52.655	1.00	9.61
	ATOM	2305	CE2	TYR	238	-9.286	7.295	52.109	1.00	13.06
	ATOM	2306	CZ	TYR	238	-8.530	7.494	50.969	1.00	12.38
15	ATOM	2307	OH	TYR	238	-8.461	8.750	50.423	1.00	15.47
	ATOM	2308	HH	TYR	238	-7.934	8.739	49.623	1.00	0.00
	ATOM	2309	C	TYR	238	-7.787	3.898	54.819	1.00	12.10
	ATOM	2310	O	TYR	238	-6.896	4.730	55.014	1.00	10.77
	ATOM	2311	N	LEU	239	-8.739	3.636	55.709	1.00	12.47
20	ATOM	2312	H	LEU	239	-9.406	2.937	55.527	1.00	0.00
	ATOM	2313	CA	LEU	239	-8.844	4.371	56.960	1.00	12.96
	ATOM	2314	CB	LEU	239	-10.225	4.161	57.581	1.00	11.26
	ATOM	2315	CG	LEU	239	-11.369	4.619	56.659	1.00	14.61
	ATOM	2316	CD1	LEU	239	-12.723	4.368	57.306	1.00	11.36
25	ATOM	2317	CD2	LEU	239	-11.208	6.100	56.303	1.00	15.59
	ATOM	2318	C	LEU	239	-7.713	4.045	57.938	1.00	15.09
	ATOM	2319	O	LEU	239	-7.609	4.644	59.014	1.00	15.00
	ATOM	2320	N	LYS	240	-6.881	3.073	57.572	1.00	15.14
	ATOM	2321	H	LYS	240	-7.069	2.565	56.760	1.00	0.00
30	ATOM	2322	CA	LYS	240	-5.721	2.713	58.380	1.00	17.35
	ATOM	2323	CB	LYS	240	-5.258	1.284	58.095	1.00	15.90
	ATOM	2324	CG	LYS	240	-6.069	0.192	58.749	1.00	19.37
	ATOM	2325	CD	LYS	240	-5.352	-1.147	58.604	1.00	23.39
	ATOM	2326	CE	LYS	240	-6.141	-2.282	59.234	1.00	26.87
35	ATOM	2327	NZ	LYS	240	-5.449	-3.592	59.076	1.00	27.64
	ATOM	2328	HZ1	LYS	240	-4.528	-3.564	59.561	1.00	0.00
	ATOM	2329	HZ2	LYS	240	-5.303	-3.797	58.066	1.00	0.00
	ATOM	2330	HZ3	LYS	240	-6.056	-4.328	59.485	1.00	0.00
	ATOM	2331	C	LYS	240	-4.602	3.674	57.988	1.00	18.17

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	ATOM	2332	O	LYS	240	-3.741	4.005	58.797	1.00	20.88
	ATOM	2333	N	LEU	241	-4.624	4.119	56.737	1.00	19.69
	ATOM	2334	H	LEU	241	-5.346	3.850	56.132	1.00	0.00
	ATOM	2335	CA	LEU	241	-3.609	5.034	56.235	1.00	24.27
5	ATOM	2336	CB	LEU	241	-3.499	4.927	54.708	1.00	27.48
	ATOM	2337	CG	LEU	241	-3.315	3.550	54.060	1.00	32.84
	ATOM	2338	CD1	LEU	241	-3.353	3.698	52.541	1.00	33.90
	ATOM	2339	CD2	LEU	241	-2.008	2.909	54.505	1.00	33.04
	ATOM	2340	C	LEU	241	-3.906	6.483	56.615	1.00	23.86
10	ATOM	2341	O	LEU	241	-2.997	7.237	56.962	1.00	25.78
	ATOM	2342	N	LYS	242	-5.176	6.870	56.544	1.00	23.81
	ATOM	2343	H	LYS	242	-5.879	6.232	56.282	1.00	0.00
	ATOM	2344	CA	LYS	242	-5.581	8.237	56.851	1.00	22.58
	ATOM	2345	CB	LYS	242	-5.570	9.074	55.565	1.00	25.37
15	ATOM	2346	CG	LYS	242	-6.401	8.478	54.432	1.00	27.76
	ATOM	2347	CD	LYS	242	-6.085	9.108	53.085	1.00	30.37
	ATOM	2348	CE	LYS	242	-4.720	8.701	52.554	1.00	28.46
	ATOM	2349	NZ	LYS	242	-4.450	9.342	51.238	1.00	27.65
	ATOM	2350	HZ1	LYS	242	-4.507	10.369	51.346	1.00	0.00
20	ATOM	2351	HZ2	LYS	242	-5.152	9.021	50.544	1.00	0.00
	ATOM	2352	HZ3	LYS	242	-3.496	9.081	50.914	1.00	0.00
	ATOM	2353	C	LYS	242	-6.955	8.287	57.512	1.00	19.10
	ATOM	2354	O	LYS	242	-7.853	7.535	57.142	1.00	17.80
	ATOM	2355	N	ALA	243	-7.110	9.197	58.473	1.00	18.84
25	ATOM	2356	H	ALA	243	-6.329	9.765	58.680	1.00	0.00
	ATOM	2357	CA	ALA	243	-8.362	9.362	59.214	1.00	17.03
	ATOM	2358	CB	ALA	243	-8.233	10.489	60.240	1.00	14.93
	ATOM	2359	C	ALA	243	-9.540	9.620	58.285	1.00	16.79
	ATOM	2360	O	ALA	243	-10.632	9.098	58.503	1.00	15.85
30	ATOM	2361	N	ASP	244	-9.332	10.486	57.295	1.00	17.15
	ATOM	2362	H	ASP	244	-8.459	10.915	57.232	1.00	0.00
	ATOM	2363	CA	ASP	244	-10.359	10.796	56.304	1.00	18.82
	ATOM	2364	CB	ASP	244	-10.481	9.599	55.347	1.00	18.91
	ATOM	2365	CG	ASP	244	-11.295	9.904	54.113	1.00	21.74
35	ATOM	2366	OD1	ASP	244	-12.087	9.030	53.712	1.00	23.51
	ATOM	2367	OD2	ASP	244	-11.139	10.998	53.533	1.00	25.93
	ATOM	2368	C	ASP	244	-11.723	11.169	56.923	1.00	19.28
	ATOM	2369	O	ASP	244	-12.786	10.734	56.461	1.00	17.04
	ATOM	2370	N	GLY	245	-11.687	11.994	57.963	1.00	18.87

	ATOM	2371	H	GLY	245	-10.837	12.330	58.306	1.00	0.00
	ATOM	2372	CA	GLY	245	-12.920	12.402	58.613	1.00	18.84
	ATOM	2373	C	GLY	245	-13.123	11.779	59.982	1.00	18.77
	ATOM	2374	O	GLY	245	-13.863	12.319	60.804	1.00	18.51
5	ATOM	2375	N	LEU	246	-12.503	10.625	60.218	1.00	18.35
	ATOM	2376	H	LEU	246	-11.973	10.209	59.505	1.00	0.00
	ATOM	2377	CA	LEU	246	-12.623	9.949	61.506	1.00	18.30
	ATOM	2378	CB	LEU	246	-12.066	8.519	61.442	1.00	17.23
	ATOM	2379	CG	LEU	246	-12.647	7.431	60.534	1.00	17.12
10	ATOM	2380	CD1	LEU	246	-11.849	6.151	60.746	1.00	18.63
	ATOM	2381	CD2	LEU	246	-14.104	7.186	60.834	1.00	15.56
	ATOM	2382	C	LEU	246	-11.866	10.707	62.591	1.00	18.47
	ATOM	2383	O	LEU	246	-10.921	11.448	62.307	1.00	17.84
	ATOM	2384	N	ILE	247	-12.253	10.453	63.837	1.00	17.52
15	ATOM	2385	H	ILE	247	-13.020	9.857	63.945	1.00	0.00
	ATOM	2386	CA	ILE	247	-11.636	11.072	65.005	1.00	18.73
	ATOM	2387	CB	ILE	247	-12.424	10.694	66.302	1.00	19.74
	ATOM	2388	CG2	ILE	247	-12.209	9.225	66.664	1.00	17.58
	ATOM	2389	CG1	ILE	247	-12.020	11.599	67.463	1.00	22.31
20	ATOM	2390	CD	ILE	247	-12.501	13.023	67.320	1.00	25.66
	ATOM	2391	C	ILE	247	-10.163	10.651	65.129	1.00	20.39
	ATOM	2392	O	ILE	247	-9.340	11.381	65.680	1.00	20.44
	ATOM	2393	N	TYR	248	-9.840	9.475	64.598	1.00	20.63
	ATOM	2394	H	TYR	248	-10.512	8.919	64.159	1.00	0.00
25	ATOM	2395	CA	TYR	248	-8.484	8.937	64.631	1.00	21.07
	ATOM	2396	CB	TYR	248	-8.174	8.391	66.030	1.00	20.66
	ATOM	2397	CG	TYR	248	-6.704	8.168	66.310	1.00	21.55
	ATOM	2398	CD1	TYR	248	-6.212	6.894	66.590	1.00	23.90
	ATOM	2399	CE1	TYR	248	-4.861	6.691	66.884	1.00	27.45
30	ATOM	2400	CD2	TYR	248	-5.810	9.235	66.327	1.00	24.95
	ATOM	2401	CE2	TYR	248	-4.457	9.045	66.622	1.00	26.89
	ATOM	2402	CZ	TYR	248	-3.992	7.773	66.900	1.00	27.31
	ATOM	2403	OH	TYR	248	-2.664	7.588	67.209	1.00	32.39
	ATOM	2404	HH	TYR	248	-2.203	8.432	67.197	1.00	0.00
35	ATOM	2405	C	TYR	248	-8.463	7.806	63.602	1.00	21.64
	ATOM	2406	O	TYR	248	-9.506	7.223	63.307	1.00	22.45
	ATOM	2407	N	CYS	249	-7.304	7.510	63.025	1.00	21.61
	ATOM	2408	H	CYS	249	-6.477	7.958	63.280	1.00	0.00
	ATOM	2409	CA	CYS	249	-7.252	6.444	62.035	1.00	22.88

	ATOM	2410	CB	CYS	249	-6.102	6.649	61.042	1.00	25.15
	ATOM	2411	SG	CYS	249	-4.471	6.722	61.779	1.00	42.25
	ATOM	2412	C	CYS	249	-7.189	5.068	62.692	1.00	21.47
	ATOM	2413	O	CYS	249	-6.787	4.929	63.853	1.00	20.61
5	ATOM	2414	N	LEU	250	-7.642	4.065	61.952	1.00	20.77
	ATOM	2415	H	LEU	250	-7.945	4.257	61.037	1.00	0.00
	ATOM	2416	CA	LEU	250	-7.674	2.687	62.425	1.00	20.19
	ATOM	2417	CB	LEU	250	-8.416	1.820	61.405	1.00	18.49
	ATOM	2418	CG	LEU	250	-9.944	1.724	61.463	1.00	17.48
10	ATOM	2419	CD1	LEU	250	-10.596	2.988	61.983	1.00	17.55
	ATOM	2420	CD2	LEU	250	-10.467	1.353	60.095	1.00	11.95
	ATOM	2421	C	LEU	250	-6.274	2.142	62.662	1.00	21.59
	ATOM	2422	O	LEU	250	-5.389	2.319	61.829	1.00	22.32
	ATOM	2423	N	LYS	251	-6.077	1.480	63.797	1.00	23.42
15	ATOM	2424	H	LYS	251	-6.834	1.343	64.404	1.00	0.00
	ATOM	2425	CA	LYS	251	-4.776	0.913	64.136	1.00	27.72
	ATOM	2426	CB	LYS	251	-4.191	1.594	65.381	1.00	27.91
	ATOM	2427	CG	LYS	251	-3.938	3.085	65.239	1.00	29.20
	ATOM	2428	CD	LYS	251	-2.882	3.372	64.197	1.00	30.93
20	ATOM	2429	CE	LYS	251	-2.677	4.859	64.038	1.00	33.75
	ATOM	2430	NZ	LYS	251	-1.669	5.159	62.987	1.00	38.98
	ATOM	2431	HZ1	LYS	251	-1.976	4.774	62.070	1.00	0.00
	ATOM	2432	HZ2	LYS	251	-0.753	4.744	63.253	1.00	0.00
	ATOM	2433	HZ3	LYS	251	-1.561	6.191	62.908	1.00	0.00
25	ATOM	2434	C	LYS	251	-4.837	-0.603	64.353	1.00	31.01
	ATOM	2435	O	LYS	251	-4.768	-1.385	63.401	1.00	34.63
	ATOM	2436	N	GLU	252	-4.991	-1.013	65.606	1.00	31.53
	ATOM	2437	H	GLU	252	-5.146	-0.377	66.329	1.00	0.00
	ATOM	2438	CA	GLU	252	-5.036	-2.426	65.952	1.00	31.94
30	ATOM	2439	CB	GLU	252	-4.535	-2.629	67.383	1.00	36.37
	ATOM	2440	CG	GLU	252	-3.113	-2.136	67.621	1.00	47.65
	ATOM	2441	CD	GLU	252	-2.878	-1.678	69.053	1.00	53.28
	ATOM	2442	OE1	GLU	252	-2.807	-0.447	69.277	1.00	56.81
	ATOM	2443	OE2	GLU	252	-2.770	-2.542	69.952	1.00	56.39
35	ATOM	2444	C	GLU	252	-6.440	-2.993	65.817	1.00	30.12
	ATOM	2445	O	GLU	252	-7.419	-2.361	66.213	1.00	29.12
	ATOM	2446	N	ALA	253	-6.527	-4.182	65.237	1.00	26.83
	ATOM	2447	H	ALA	253	-5.716	-4.627	64.930	1.00	0.00
	ATOM	2448	CA	ALA	253	-7.795	-4.853	65.063	1.00	26.20

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	ATOM	2449	CB	ALA	253	-7.698	-5.868	63.944	1.00	25.70
	ATOM	2450	C	ALA	253	-8.149	-5.554	66.361	1.00	28.42
	ATOM	2451	O	ALA	253	-7.276	-6.096	67.036	1.00	28.38
	ATOM	2452	N	CYS	254	-9.414	-5.473	66.746	1.00	31.05
5	ATOM	2453	H	CYS	254	-10.046	-4.955	66.206	1.00	0.00
	ATOM	2454	CA	CYS	254	-9.907	-6.143	67.941	1.00	32.95
	ATOM	2455	CB	CYS	254	-11.087	-5.361	68.533	1.00	34.98
	ATOM	2456	SG	CYS	254	-11.787	-6.015	70.077	1.00	32.47
	ATOM	2457	C	CYS	254	-10.372	-7.475	67.358	1.00	35.53
10	ATOM	2458	O	CYS	254	-11.391	-7.528	66.674	1.00	33.47
	ATOM	2459	N	PRO	255	-9.584	-8.545	67.554	1.00	40.79
	ATOM	2460	CD	PRO	255	-8.346	-8.542	68.352	1.00	42.81
	ATOM	2461	CA	PRO	255	-9.865	-9.900	67.058	1.00	45.35
	ATOM	2462	CB	PRO	255	-8.780	-10.738	67.733	1.00	46.01
15	ATOM	2463	CG	PRO	255	-7.643	-9.774	67.847	1.00	43.91
	ATOM	2464	C	PRO	255	-11.258	-10.437	67.368	1.00	48.63
	ATOM	2465	O	PRO	255	-12.027	-9.807	68.088	1.00	50.93
	ATOM	2466	N	ASN	256	-11.549	-11.612	66.813	1.00	52.77
	ATOM	2467	H	ASN	256	-10.862	-12.052	66.277	1.00	0.00
20	ATOM	2468	CA	ASN	256	-12.825	-12.314	66.965	1.00	56.77
	ATOM	2469	CB	ASN	256	-12.631	-13.804	66.654	1.00	56.87
	ATOM	2470	CG	ASN	256	-11.494	-14.430	67.455	1.00	58.22
	ATOM	2471	OD1	ASN	256	-10.354	-14.507	66.987	1.00	58.21
	ATOM	2472	ND2	ASN	256	-11.798	-14.874	68.666	1.00	60.09
25	ATOM	2473	HD21	ASN	256	-12.721	-14.706	68.970	1.00	0.00
	ATOM	2474	HD22	ASN	256	-11.107	-15.313	69.188	1.00	0.00
	ATOM	2475	C	ASN	256	-13.545	-12.159	68.308	1.00	59.22
	ATOM	2476	O	ASN	256	-12.888	-12.281	69.365	1.00	60.95
	ATOM	2477	OT	ASN	256	-14.776	-11.934	68.282	1.00	62.08
30	ATOM	2478	CB	ASN	301	-31.365	5.229	63.299	1.00	56.01
	ATOM	2479	CG	ASN	301	-32.706	5.204	64.007	1.00	56.26
	ATOM	2480	OD1	ASN	301	-33.338	4.151	64.119	1.00	54.90
	ATOM	2481	ND2	ASN	301	-33.146	6.360	64.490	1.00	56.88
	ATOM	2482	HD21	ASN	301	-32.620	7.179	64.396	1.00	0.00
35	ATOM	2483	HD22	ASN	301	-34.026	6.336	64.926	1.00	0.00
	ATOM	2484	C	ASN	301	-30.146	4.272	65.265	1.00	56.46
	ATOM	2485	O	ASN	301	-30.767	3.599	66.093	1.00	57.32
	ATOM	2486	HT1	ASN	301	-31.950	2.747	64.009	1.00	0.00
	ATOM	2487	HT2	ASN	301	-30.386	2.096	64.004	1.00	0.00

	ATOM	2488	N	ASN	301	-31.028	2.767	63.513	1.00	55.62
	ATOM	2489	HT3	ASN	301	-31.104	2.517	62.501	1.00	0.00
	ATOM	2490	CA	ASN	301	-30.427	4.112	63.774	1.00	56.70
	ATOM	2491	N	GLN	302	-29.220	5.167	65.602	1.00	55.38
5	ATOM	2492	H	GLN	302	-28.777	5.736	64.935	1.00	0.00
	ATOM	2493	CA	GLN	302	-28.849	5.397	66.995	1.00	52.01
	ATOM	2494	CB	GLN	302	-28.061	4.185	67.520	1.00	54.35
	ATOM	2495	CG	GLN	302	-28.174	3.927	69.017	1.00	56.79
	ATOM	2496	CD	GLN	302	-29.560	3.475	69.421	1.00	60.50
10	ATOM	2497	OE1	GLN	302	-30.386	4.280	69.859	1.00	63.09
	ATOM	2498	NE2	GLN	302	-29.825	2.182	69.280	1.00	60.40
	ATOM	2499	HE21	GLN	302	-29.131	1.575	68.950	1.00	0.00
	ATOM	2500	HE22	GLN	302	-30.732	1.904	69.512	1.00	0.00
	ATOM	2501	C	GLN	302	-27.998	6.670	67.089	1.00	47.72
15	ATOM	2502	O	GLN	302	-28.185	7.614	66.314	1.00	46.40
	ATOM	2503	N	LEU	303	-27.061	6.677	68.034	1.00	43.29
	ATOM	2504	H	LEU	303	-26.909	5.925	68.633	1.00	0.00
	ATOM	2505	CA	LEU	303	-26.165	7.802	68.260	1.00	36.89
	ATOM	2506	CB	LEU	303	-25.966	7.986	69.764	1.00	38.96
20	ATOM	2507	CG	LEU	303	-27.251	7.951	70.594	1.00	42.01
	ATOM	2508	CD1	LEU	303	-26.952	7.491	72.007	1.00	41.24
	ATOM	2509	CD2	LEU	303	-27.926	9.316	70.572	1.00	43.88
	ATOM	2510	C	LEU	303	-24.824	7.489	67.595	1.00	31.37
	ATOM	2511	O	LEU	303	-23.917	6.942	68.228	1.00	31.51
25	ATOM	2512	N	PTY	304	-24.712	7.799	66.309	1.00	25.51
	ATOM	2513	H	PTY	304	-25.443	8.263	65.853	1.00	0.00
	ATOM	2514	CA	PTY	304	-23.481	7.545	65.572	1.00	22.04
	ATOM	2515	CB	PTY	304	-23.774	6.882	64.224	1.00	18.08
	ATOM	2516	CG	PTY	304	-24.310	5.478	64.358	1.00	16.80
30	ATOM	2517	CD1	PTY	304	-23.459	4.375	64.296	1.00	15.50
	ATOM	2518	CE1	PTY	304	-23.950	3.078	64.462	1.00	17.12
	ATOM	2519	CD2	PTY	304	-25.662	5.253	64.580	1.00	18.22
	ATOM	2520	CE2	PTY	304	-26.160	3.971	64.743	1.00	18.21
	ATOM	2521	CZ	PTY	304	-25.305	2.889	64.687	1.00	16.53
35	ATOM	2522	OH	PTY	304	-25.840	1.637	64.857	1.00	15.66
	ATOM	2523	OR1	PTY	304	-26.848	1.189	66.998	1.00	17.78
	ATOM	2524	OR2	PTY	304	-24.474	1.199	66.960	1.00	13.33
	ATOM	2525	OR3	PTY	304	-25.836	-0.551	65.882	1.00	19.12
	ATOM	2526	PR	PTY	304	-25.659	0.847	66.222	1.00	16.13

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	ATOM	2527	C	PTY	304	-22.717	8.839	65.375	1.00	20.65
	ATOM	2528	O	PTY	304	-23.313	9.909	65.272	1.00	23.13
	ATOM	2529	N	ASN	305	-21.396	8.741	65.358	1.00	18.57
	ATOM	2530	H	ASN	305	-21.009	7.863	65.445	1.00	0.00
5	ATOM	2531	CA	ASN	305	-20.545	9.907	65.189	1.00	20.26
	ATOM	2532	CB	ASN	305	-19.157	9.625	65.764	1.00	19.11
	ATOM	2533	CG	ASN	305	-19.197	9.305	67.241	1.00	21.22
	ATOM	2534	OD1	ASN	305	-19.003	10.180	68.084	1.00	24.78
	ATOM	2535	ND2	ASN	305	-19.481	8.054	67.567	1.00	20.41
10	ATOM	2536	HD21	ASN	305	-19.675	7.444	66.829	1.00	0.00
	ATOM	2537	HD22	ASN	305	-19.499	7.805	68.521	1.00	0.00
	ATOM	2538	C	ASN	305	-20.452	10.333	63.725	1.00	20.42
	ATOM	2539	O	ASN	305	-20.549	9.503	62.819	1.00	21.37
	ATOM	2540	N	GLU	306	-20.295	11.635	63.506	1.00	21.58
15	ATOM	2541	H	GLU	306	-20.232	12.234	64.271	1.00	0.00
	ATOM	2542	CA	GLU	306	-20.191	12.203	62.165	1.00	22.52
	ATOM	2543	CB	GLU	306	-20.911	13.556	62.093	1.00	28.56
	ATOM	2544	CG	GLU	306	-22.411	13.510	62.344	1.00	37.30
	ATOM	2545	CD	GLU	306	-23.053	14.889	62.283	1.00	41.64
20	ATOM	2546	OE1	GLU	306	-22.761	15.719	63.169	1.00	43.36
	ATOM	2547	OE2	GLU	306	-23.846	15.143	61.349	1.00	45.10
	ATOM	2548	C	GLU	306	-18.729	12.416	61.791	1.00	20.22
	ATOM	2549	O	GLU	306	-17.859	12.502	62.665	1.00	20.01
	ATOM	2550	N	LEU	307	-18.469	12.528	60.493	1.00	18.25
25	ATOM	2551	H	LEU	307	-19.208	12.499	59.842	1.00	0.00
	ATOM	2552	CA	LEU	307	-17.118	12.747	60.005	1.00	16.72
	ATOM	2553	CB	LEU	307	-16.995	12.307	58.544	1.00	16.17
	ATOM	2554	CG	LEU	307	-17.056	10.831	58.166	1.00	13.26
	ATOM	2555	CD1	LEU	307	-16.950	10.720	56.658	1.00	14.79
30	ATOM	2556	CD2	LEU	307	-15.921	10.075	58.829	1.00	12.43
	ATOM	2557	C	LEU	307	-16.778	14.223	60.080	1.00	18.93
	ATOM	2558	O	LEU	307	-17.632	15.075	59.843	1.00	19.72
	ATOM	2559	N	ASN	308	-15.544	14.529	60.455	1.00	18.95
	ATOM	2560	H	ASN	308	-14.946	13.819	60.757	1.00	0.00
35	ATOM	2561	CA	ASN	308	-15.108	15.913	60.479	1.00	22.39
	ATOM	2562	CB	ASN	308	-13.848	16.076	61.324	1.00	22.65
	ATOM	2563	CG	ASN	308	-13.325	17.502	61.322	1.00	24.93
	ATOM	2564	OD1	ASN	308	-13.764	18.348	60.540	1.00	23.61
	ATOM	2565	ND2	ASN	308	-12.363	17.769	62.186	1.00	29.91

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	ATOM	2566	HD21	ASN	308	-12.039	17.026	62.740	1.00	0.00
	ATOM	2567	HD22	ASN	308	-12.030	18.689	62.233	1.00	0.00
	ATOM	2568	C	ASN	308	-14.800	16.173	59.012	1.00	22.77
	ATOM	2569	O	ASN	308	-13.728	15.821	58.519	1.00	22.81
5	ATOM	2570	N	LEU	309	-15.770	16.733	58.305	1.00	25.79
	ATOM	2571	H	LEU	309	-16.614	16.937	58.764	1.00	0.00
	ATOM	2572	CA	LEU	309	-15.624	17.002	56.884	1.00	29.56
	ATOM	2573	CB	LEU	309	-16.937	17.546	56.316	1.00	30.40
	ATOM	2574	CG	LEU	309	-18.120	16.573	56.465	1.00	31.06
10	ATOM	2575	CD1	LEU	309	-19.365	17.171	55.845	1.00	29.69
	ATOM	2576	CD2	LEU	309	-17.802	15.229	55.814	1.00	28.45
	ATOM	2577	C	LEU	309	-14.433	17.879	56.496	1.00	32.74
	ATOM	2578	O	LEU	309	-13.980	17.840	55.352	1.00	34.00
	ATOM	2579	N	GLY	310	-13.896	18.628	57.453	1.00	34.39
15	ATOM	2580	H	GLY	310	-14.259	18.618	58.363	1.00	0.00
	ATOM	2581	CA	GLY	310	-12.749	19.471	57.166	1.00	37.43
	ATOM	2582	C	GLY	310	-11.451	18.694	56.967	1.00	40.37
	ATOM	2583	O	GLY	310	-10.494	19.212	56.382	1.00	42.20
	ATOM	2584	N	ARG	311	-11.411	17.454	57.453	1.00	39.39
20	ATOM	2585	H	ARG	311	-12.204	17.096	57.902	1.00	0.00
	ATOM	2586	CA	ARG	311	-10.220	16.613	57.334	1.00	37.84
	ATOM	2587	CB	ARG	311	-9.912	15.938	58.673	1.00	38.89
	ATOM	2588	CG	ARG	311	-9.364	16.864	59.737	1.00	42.25
	ATOM	2589	CD	ARG	311	-9.096	16.101	61.022	1.00	47.16
25	ATOM	2590	NE	ARG	311	-10.323	15.546	61.587	1.00	51.46
	ATOM	2591	HE	ARG	311	-11.178	15.829	61.204	1.00	0.00
	ATOM	2592	CZ	ARG	311	-10.364	14.671	62.588	1.00	53.11
	ATOM	2593	NH1	ARG	311	-9.242	14.231	63.145	1.00	54.45
	ATOM	2594	HH11	ARG	311	-8.350	14.554	62.828	1.00	0.00
30	ATOM	2595	HH12	ARG	311	-9.301	13.580	63.901	1.00	0.00
	ATOM	2596	NH2	ARG	311	-11.535	14.255	63.054	1.00	54.64
	ATOM	2597	HH21	ARG	311	-12.383	14.597	62.652	1.00	0.00
	ATOM	2598	HH22	ARG	311	-11.568	13.601	63.810	1.00	0.00
	ATOM	2599	C	ARG	311	-10.306	15.545	56.246	1.00	35.04
35	ATOM	2600	O	ARG	311	-9.479	14.632	56.201	1.00	35.34
	ATOM	2601	N	ARG	312	-11.315	15.639	55.389	1.00	34.68
	ATOM	2602	H	ARG	312	-11.927	16.402	55.451	1.00	0.00
	ATOM	2603	CA	ARG	312	-11.484	14.668	54.316	1.00	34.78
	ATOM	2604	CB	ARG	312	-12.882	14.766	53.706	1.00	35.31

	ATOM	2605	CG	ARG	312	-13.947	13.942	54.403	1.00	36.14
	ATOM	2606	CD	ARG	312	-15.085	13.646	53.436	1.00	37.95
	ATOM	2607	NE	ARG	312	-14.597	12.970	52.232	1.00	37.17
	ATOM	2608	HE	ARG	312	-13.715	12.542	52.265	1.00	0.00
5	ATOM	2609	CZ	ARG	312	-15.268	12.882	51.086	1.00	37.05
	ATOM	2610	NH1	ARG	312	-16.473	13.423	50.966	1.00	38.97
	ATOM	2611	HH11	ARG	312	-16.899	13.908	51.731	1.00	0.00
	ATOM	2612	HH12	ARG	312	-16.956	13.348	50.094	1.00	0.00
	ATOM	2613	NH2	ARG	312	-14.721	12.271	50.044	1.00	36.61
10	ATOM	2614	HH21	ARG	312	-13.804	11.879	50.127	1.00	0.00
	ATOM	2615	HH22	ARG	312	-15.225	12.194	49.185	1.00	0.00
	ATOM	2616	C	ARG	312	-10.449	14.829	53.209	1.00	36.45
	ATOM	2617	O	ARG	312	-9.953	15.929	52.957	1.00	35.30
	ATOM	2618	N	GLU	313	-10.121	13.715	52.560	1.00	37.25
15	ATOM	2619	H	GLU	313	-10.548	12.871	52.795	1.00	0.00
	ATOM	2620	CA	GLU	313	-9.169	13.713	51.459	1.00	37.51
	ATOM	2621	CB	GLU	313	-8.586	12.317	51.249	1.00	39.21
	ATOM	2622	CG	GLU	313	-7.367	12.039	52.100	1.00	42.52
	ATOM	2623	CD	GLU	313	-6.114	12.722	51.576	1.00	43.09
20	ATOM	2624	OE1	GLU	313	-5.282	12.027	50.962	1.00	44.41
	ATOM	2625	OE2	GLU	313	-5.954	13.945	51.778	1.00	44.79
	ATOM	2626	C	GLU	313	-9.903	14.162	50.214	1.00	35.75
	ATOM	2627	O	GLU	313	-10.973	13.639	49.894	1.00	37.66
	ATOM	2628	N	GLU	314	-9.332	15.139	49.523	1.00	33.41
25	ATOM	2629	H	GLU	314	-8.466	15.487	49.818	1.00	0.00
	ATOM	2630	CA	GLU	314	-9.939	15.683	48.319	1.00	31.60
	ATOM	2631	CB	GLU	314	-9.771	17.214	48.305	1.00	37.69
	ATOM	2632	CG	GLU	314	-10.165	17.916	46.999	1.00	46.27
	ATOM	2633	CD	GLU	314	-8.965	18.483	46.233	1.00	51.86
30	ATOM	2634	OE1	GLU	314	-8.667	19.689	46.391	1.00	54.73
	ATOM	2635	OE2	GLU	314	-8.322	17.728	45.468	1.00	53.64
	ATOM	2636	C	GLU	314	-9.363	15.083	47.043	1.00	25.93
	ATOM	2637	O	GLU	314	-8.152	14.916	46.918	1.00	24.72
	ATOM	2638	N	PTY	315	-10.249	14.729	46.119	1.00	21.35
35	ATOM	2639	H	PTY	315	-11.206	14.843	46.282	1.00	0.00
	ATOM	2640	CA	PTY	315	-9.854	14.204	44.820	1.00	19.78
	ATOM	2641	CB	PTY	315	-10.482	12.839	44.544	1.00	17.55
	ATOM	2642	CG	PTY	315	-9.678	11.690	45.091	1.00	14.77
	ATOM	2643	CD1	PTY	315	-8.575	11.196	44.396	1.00	9.06

	ATOM	2644	CE1	PTY	315	-7.808	10.163	44.916	1.00	12.12
	ATOM	2645	CD2	PTY	315	-9.998	11.117	46.319	1.00	14.36
	ATOM	2646	CE2	PTY	315	-9.239	10.085	46.847	1.00	14.01
	ATOM	2647	CZ	PTY	315	-8.146	9.612	46.145	1.00	14.96
5	ATOM	2648	OH	PTY	315	-7.408	8.580	46.682	1.00	15.26
	ATOM	2649	OR1	PTY	315	-6.224	9.301	48.730	1.00	15.27
	ATOM	2650	OR2	PTY	315	-5.231	9.872	46.712	1.00	14.33
	ATOM	2651	OR3	PTY	315	-5.246	7.621	47.409	1.00	16.50
	ATOM	2652	PR	PTY	315	-6.018	8.864	47.331	1.00	14.86
10	ATOM	2653	C	PTY	315	-10.349	15.218	43.808	1.00	21.32
	ATOM	2654	O	PTY	315	-11.354	15.892	44.034	1.00	22.46
	ATOM	2655	N	ASP	316	-9.629	15.351	42.707	1.00	22.70
	ATOM	2656	H	ASP	316	-8.875	14.753	42.558	1.00	0.00
	ATOM	2657	CA	ASP	316	-10.009	16.306	41.684	1.00	24.09
15	ATOM	2658	CB	ASP	316	-8.770	16.826	40.954	1.00	24.94
	ATOM	2659	CG	ASP	316	-7.853	17.622	41.860	1.00	28.90
	ATOM	2660	OD1	ASP	316	-7.849	18.865	41.756	1.00	32.00
	ATOM	2661	OD2	ASP	316	-7.140	17.004	42.681	1.00	29.88
	ATOM	2662	C	ASP	316	-10.981	15.691	40.698	1.00	24.49
20	ATOM	2663	O	ASP	316	-11.148	14.473	40.646	1.00	23.60
	ATOM	2664	N	VAL	317	-11.644	16.559	39.948	1.00	27.16
	ATOM	2665	H	VAL	317	-11.475	17.521	40.029	1.00	0.00
	ATOM	2666	CA	VAL	317	-12.605	16.155	38.934	1.00	32.09
	ATOM	2667	CB	VAL	317	-14.069	16.266	39.437	1.00	35.09
25	ATOM	2668	CG1	VAL	317	-14.375	15.156	40.434	1.00	36.22
	ATOM	2669	CG2	VAL	317	-14.314	17.636	40.066	1.00	36.89
	ATOM	2670	C	VAL	317	-12.410	17.095	37.757	1.00	30.78
	ATOM	2671	O	VAL	317	-11.807	18.159	37.906	1.00	28.67
	ATOM	2672	N	LEU	318	-12.871	16.684	36.583	1.00	33.70
30	ATOM	2673	H	LEU	318	-13.315	15.816	36.543	1.00	0.00
	ATOM	2674	CA	LEU	318	-12.745	17.513	35.395	1.00	36.88
	ATOM	2675	CB	LEU	318	-13.044	16.699	34.138	1.00	34.38
	ATOM	2676	CG	LEU	318	-12.133	15.505	33.854	1.00	32.08
	ATOM	2677	CD1	LEU	318	-12.560	14.864	32.553	1.00	33.40
35	ATOM	2678	CD2	LEU	318	-10.678	15.939	33.775	1.00	30.49
	ATOM	2679	C	LEU	318	-13.698	18.700	35.492	1.00	41.41
	ATOM	2680	O	LEU	318	-14.768	18.604	36.108	1.00	41.34
	ATOM	2681	N	ASP	319	-13.282	19.821	34.911	1.00	46.71
	ATOM	2682	H	ASP	319	-12.447	19.843	34.406	1.00	0.00

	ATOM	2683	CA	ASP	319	-14.072	21.048	34.913	1.00	51.29
	ATOM	2684	CB	ASP	319	-13.204	22.239	35.340	1.00	53.24
	ATOM	2685	CG	ASP	319	-11.958	22.400	34.479	1.00	55.43
	ATOM	2686	OD1	ASP	319	-12.065	22.950	33.361	1.00	58.31
5	ATOM	2687	OD2	ASP	319	-10.868	21.982	34.923	1.00	58.61
	ATOM	2688	C	ASP	319	-14.682	21.306	33.535	1.00	52.86
	ATOM	2689	O	ASP	319	-14.195	20.701	32.549	1.00	53.27
	ATOM	2690	OT	ASP	319	-15.634	22.114	33.459	1.00	54.58
	ATOM	2691	OH2	H2O	501	-16.395	6.573	53.935	1.00	13.04
10	ATOM	2692	H1	H2O	501	-15.625	7.149	54.126	1.00	0.00
	ATOM	2693	H2	H2O	501	-16.189	6.220	53.062	1.00	0.00
	ATOM	2694	OH2	H2O	502	-6.900	-1.703	48.537	1.00	15.81
	ATOM	2695	H1	H2O	502	-6.073	-2.133	48.827	1.00	0.00
	ATOM	2696	H2	H2O	502	-7.012	-1.023	49.224	1.00	0.00
15	ATOM	2697	OH2	H2O	503	-7.775	0.446	50.612	1.00	12.12
	ATOM	2698	H1	H2O	503	-8.328	0.785	51.329	1.00	0.00
	ATOM	2699	H2	H2O	503	-8.364	0.608	49.869	1.00	0.00
	ATOM	2700	OH2	H2O	504	-5.965	5.376	45.701	1.00	13.82
	ATOM	2701	H1	H2O	504	-5.838	6.191	46.188	1.00	0.00
20	ATOM	2702	H2	H2O	504	-5.040	5.192	45.431	1.00	0.00
	ATOM	2703	OH2	H2O	505	-14.971	-6.776	51.457	1.00	11.75
	ATOM	2704	H1	H2O	505	-14.401	-7.005	50.693	1.00	0.00
	ATOM	2705	H2	H2O	505	-15.747	-6.411	50.986	1.00	0.00
	ATOM	2706	OH2	H2O	506	-7.399	-1.565	45.723	1.00	20.80
25	ATOM	2707	H1	H2O	506	-6.869	-0.820	45.388	1.00	0.00
	ATOM	2708	H2	H2O	506	-7.127	-1.603	46.669	1.00	0.00
	ATOM	2709	OH2	H2O	507	-3.458	7.189	49.505	1.00	12.46
	ATOM	2710	H1	H2O	507	-3.854	6.375	49.171	1.00	0.00
	ATOM	2711	H2	H2O	507	-4.035	7.857	49.121	1.00	0.00
30	ATOM	2712	OH2	H2O	508	-19.524	4.162	75.938	1.00	31.54
	ATOM	2713	H1	H2O	508	-20.107	4.703	76.513	1.00	0.00
	ATOM	2714	H2	H2O	508	-19.510	4.732	75.158	1.00	0.00
	ATOM	2715	OH2	H2O	509	11.153	11.020	41.619	1.00	23.22
	ATOM	2716	H1	H2O	509	10.658	10.668	40.869	1.00	0.00
35	ATOM	2717	H2	H2O	509	10.757	11.895	41.712	1.00	0.00
	ATOM	2718	OH2	H2O	510	-17.729	-5.463	50.658	1.00	8.16
	ATOM	2719	H1	H2O	510	-18.166	-5.105	49.866	1.00	0.00
	ATOM	2720	H2	H2O	510	-18.454	-6.018	50.978	1.00	0.00
	ATOM	2721	OH2	H2O	511	-2.939	4.711	45.111	1.00	12.99

	ATOM	2722	H1	H2O	511	-2.168	4.703	45.673	1.00	0.00
	ATOM	2723	H2	H2O	511	-2.789	3.917	44.596	1.00	0.00
	ATOM	2724	OH2	H2O	512	-14.697	8.482	54.840	1.00	28.53
	ATOM	2725	H1	H2O	512	-15.286	8.807	55.530	1.00	0.00
5	ATOM	2726	H2	H2O	512	-13.856	8.877	55.112	1.00	0.00
	ATOM	2727	OH2	H2O	513	-4.301	-4.082	45.672	1.00	22.83
	ATOM	2728	H1	H2O	513	-3.747	-3.518	45.097	1.00	0.00
	ATOM	2729	H2	H2O	513	-5.176	-3.940	45.269	1.00	0.00
	ATOM	2730	OH2	H2O	514	-21.713	7.798	61.095	1.00	18.35
10	ATOM	2731	H1	H2O	514	-21.035	8.271	61.588	1.00	0.00
	ATOM	2732	H2	H2O	514	-22.251	8.537	60.778	1.00	0.00
	ATOM	2733	OH2	H2O	515	-10.843	5.000	40.733	1.00	28.99
	ATOM	2734	H1	H2O	515	-10.540	4.529	41.519	1.00	0.00
	ATOM	2735	H2	H2O	515	-10.110	4.889	40.111	1.00	0.00
15	ATOM	2736	OH2	H2O	516	1.069	6.001	27.806	1.00	27.31
	ATOM	2737	H1	H2O	516	1.435	6.888	27.776	1.00	0.00
	ATOM	2738	H2	H2O	516	0.143	6.122	27.559	1.00	0.00
	ATOM	2739	OH2	H2O	517	-4.403	-3.111	48.506	1.00	19.12
	ATOM	2740	H1	H2O	517	-4.371	-3.215	47.537	1.00	0.00
20	ATOM	2741	H2	H2O	517	-3.595	-2.596	48.690	1.00	0.00
	ATOM	2742	OH2	H2O	518	-20.848	12.059	58.636	1.00	30.17
	ATOM	2743	H1	H2O	518	-20.732	12.086	57.675	1.00	0.00
	ATOM	2744	H2	H2O	518	-21.337	11.237	58.756	1.00	0.00
	ATOM	2745	OH2	H2O	519	-7.330	-4.001	44.530	1.00	20.45
25	ATOM	2746	H1	H2O	519	-7.479	-3.098	44.898	1.00	0.00
	ATOM	2747	H2	H2O	519	-7.935	-4.524	45.062	1.00	0.00
	ATOM	2748	OH2	H2O	520	-12.664	0.989	38.964	1.00	15.59
	ATOM	2749	H1	H2O	520	-12.180	0.157	39.070	1.00	0.00
	ATOM	2750	H2	H2O	520	-13.550	0.682	39.238	1.00	0.00
30	ATOM	2751	OH2	H2O	521	-11.379	10.139	30.946	1.00	26.07
	ATOM	2752	H1	H2O	521	-11.624	10.977	30.530	1.00	0.00
	ATOM	2753	H2	H2O	521	-11.994	9.525	30.519	1.00	0.00
	ATOM	2754	OH2	H2O	522	-15.662	9.282	47.198	1.00	17.30
	ATOM	2755	H1	H2O	522	-15.240	9.703	46.450	1.00	0.00
35	ATOM	2756	H2	H2O	522	-16.316	9.967	47.478	1.00	0.00
	ATOM	2757	OH2	H2O	523	-11.947	-18.788	49.297	1.00	31.49
	ATOM	2758	H1	H2O	523	-11.710	-18.432	48.437	1.00	0.00
	ATOM	2759	H2	H2O	523	-12.293	-17.992	49.754	1.00	0.00
	ATOM	2760	OH2	H2O	524	6.740	2.001	42.957	1.00	21.38

	ATOM	2761	H1	H2O	524	5.847	2.141	43.289	1.00	0.00
	ATOM	2762	H2	H2O	524	6.864	1.047	42.981	1.00	0.00
	ATOM	2763	OH2	H2O	525	-8.682	6.518	44.398	1.00	27.19
	ATOM	2764	H1	H2O	525	-7.791	6.155	44.453	1.00	0.00
5	ATOM	2765	H2	H2O	525	-8.649	7.215	45.061	1.00	0.00
	ATOM	2766	OH2	H2O	526	-14.840	3.578	44.839	1.00	22.05
	ATOM	2767	H1	H2O	526	-15.718	3.347	45.149	1.00	0.00
	ATOM	2768	H2	H2O	526	-14.551	4.227	45.498	1.00	0.00
	ATOM	2769	OH2	H2O	527	4.492	23.057	38.874	1.00	25.33
10	ATOM	2770	H1	H2O	527	4.800	22.472	38.173	1.00	0.00
	ATOM	2771	H2	H2O	527	5.246	22.944	39.473	1.00	0.00
	ATOM	2772	OH2	H2O	528	0.375	-17.917	41.574	1.00	56.36
	ATOM	2773	H1	H2O	528	-0.351	-18.113	42.169	1.00	0.00
	ATOM	2774	H2	H2O	528	-0.043	-17.548	40.796	1.00	0.00
15	ATOM	2775	OH2	H2O	529	7.016	14.850	51.046	1.00	20.70
	ATOM	2776	H1	H2O	529	6.142	14.448	50.870	1.00	0.00
	ATOM	2777	H2	H2O	529	6.980	15.645	50.511	1.00	0.00
	ATOM	2778	OH2	H2O	530	-7.683	-1.801	42.232	1.00	34.83
	ATOM	2779	H1	H2O	530	-8.052	-1.273	42.957	1.00	0.00
20	ATOM	2780	H2	H2O	530	-7.249	-2.522	42.702	1.00	0.00
	ATOM	2781	OH2	H2O	531	-21.235	6.653	69.461	1.00	40.97
	ATOM	2782	H1	H2O	531	-22.089	6.966	69.119	1.00	0.00
	ATOM	2783	H2	H2O	531	-21.371	6.744	70.411	1.00	0.00
	ATOM	2784	OH2	H2O	532	0.051	-0.240	27.111	1.00	38.10
25	ATOM	2785	H1	H2O	532	-0.526	-0.554	26.406	1.00	0.00
	ATOM	2786	H2	H2O	532	0.153	0.695	26.895	1.00	0.00
	ATOM	2787	OH2	H2O	533	4.720	13.526	50.274	1.00	24.25
	ATOM	2788	H1	H2O	533	3.779	13.360	50.353	1.00	0.00
	ATOM	2789	H2	H2O	533	5.030	12.691	49.901	1.00	0.00
30	ATOM	2790	OH2	H2O	535	-24.439	-4.493	65.220	1.00	19.89
	ATOM	2791	H1	H2O	535	-23.921	-4.800	64.468	1.00	0.00
	ATOM	2792	H2	H2O	535	-23.970	-4.918	65.943	1.00	0.00
	ATOM	2793	OH2	H2O	536	-24.821	-8.124	64.414	1.00	26.52
	ATOM	2794	H1	H2O	536	-25.733	-8.277	64.141	1.00	0.00
35	ATOM	2795	H2	H2O	536	-24.637	-7.232	64.092	1.00	0.00
	ATOM	2796	OH2	H2O	537	-1.448	9.507	51.754	1.00	14.14
	ATOM	2797	H1	H2O	537	-2.234	9.866	52.178	1.00	0.00
	ATOM	2798	H2	H2O	537	-1.227	8.752	52.319	1.00	0.00
	ATOM	2799	OH2	H2O	538	-19.810	-23.909	45.616	1.00	42.72

	ATOM	2800	H1	H2O	538	-20.226	-24.776	45.518	1.00	0.00
	ATOM	2801	H2	H2O	538	-19.298	-24.029	46.420	1.00	0.00
	ATOM	2802	OH2	H2O	539	-6.034	-10.821	42.457	1.00	29.94
	ATOM	2803	H1	H2O	539	-6.800	-10.777	43.033	1.00	0.00
5	ATOM	2804	H2	H2O	539	-5.304	-10.964	43.068	1.00	0.00
	ATOM	2805	OH2	H2O	540	-20.033	10.958	50.001	1.00	31.83
	ATOM	2806	H1	H2O	540	-19.256	10.718	50.512	1.00	0.00
	ATOM	2807	H2	H2O	540	-20.491	10.121	49.920	1.00	0.00
	ATOM	2808	OH2	H2O	541	-5.125	-7.851	62.359	1.00	38.63
10	ATOM	2809	H1	H2O	541	-4.372	-8.168	61.862	1.00	0.00
	ATOM	2810	H2	H2O	541	-5.411	-7.104	61.798	1.00	0.00
	ATOM	2811	OH2	H2O	542	-1.080	20.333	46.689	1.00	26.15
	ATOM	2812	H1	H2O	542	-1.337	19.477	47.057	1.00	0.00
	ATOM	2813	H2	H2O	542	-1.916	20.809	46.638	1.00	0.00
15	ATOM	2814	OH2	H2O	543	5.975	26.290	37.583	1.00	43.59
	ATOM	2815	H1	H2O	543	6.265	26.840	36.852	1.00	0.00
	ATOM	2816	H2	H2O	543	6.741	26.247	38.153	1.00	0.00
	ATOM	2817	OH2	H2O	544	-13.632	-13.848	50.081	1.00	27.21
	ATOM	2818	H1	H2O	544	-13.441	-13.263	50.817	1.00	0.00
20	ATOM	2819	H2	H2O	544	-13.685	-13.228	49.342	1.00	0.00
	ATOM	2820	OH2	H2O	545	6.897	4.096	46.579	1.00	32.58
	ATOM	2821	H1	H2O	545	7.538	4.515	47.182	1.00	0.00
	ATOM	2822	H2	H2O	545	7.296	3.250	46.353	1.00	0.00
	ATOM	2823	OH2	H2O	546	-19.007	6.577	73.627	1.00	51.06
25	ATOM	2824	H1	H2O	546	-18.833	7.495	73.390	1.00	0.00
	ATOM	2825	H2	H2O	546	-18.795	6.148	72.791	1.00	0.00
	ATOM	2826	OH2	H2O	547	-0.107	9.991	22.576	1.00	43.45
	ATOM	2827	H1	H2O	547	-0.622	10.655	23.054	1.00	0.00
	ATOM	2828	H2	H2O	547	0.140	10.441	21.766	1.00	0.00
30	ATOM	2829	OH2	H2O	549	-20.845	-8.815	51.470	1.00	32.88
	ATOM	2830	H1	H2O	549	-20.910	-9.731	51.186	1.00	0.00
	ATOM	2831	H2	H2O	549	-20.734	-8.346	50.637	1.00	0.00
	ATOM	2832	OH2	H2O	550	-18.995	-8.847	74.340	1.00	33.79
	ATOM	2833	H1	H2O	550	-19.031	-9.373	73.541	1.00	0.00
35	ATOM	2834	H2	H2O	550	-18.620	-8.012	74.046	1.00	0.00
	ATOM	2835	OH2	H2O	551	-29.193	1.529	65.322	1.00	28.70
	ATOM	2836	H1	H2O	551	-29.521	1.026	66.091	1.00	0.00
	ATOM	2837	H2	H2O	551	-28.243	1.541	65.504	1.00	0.00
	ATOM	2838	OH2	H2O	552	-9.376	-14.036	60.634	1.00	39.70

	ATOM	2839	H1	H2O	552	-9.678	-14.141	59.724	1.00	0.00
	ATOM	2840	H2	H2O	552	-8.558	-14.547	60.629	1.00	0.00
	ATOM	2841	OH2	H2O	553	15.303	7.535	43.610	1.00	43.10
	ATOM	2842	H1	H2O	553	15.256	8.508	43.528	1.00	0.00
5	ATOM	2843	H2	H2O	553	14.945	7.223	42.779	1.00	0.00
	ATOM	2844	OH2	H2O	554	-6.351	-6.041	58.195	1.00	39.35
	ATOM	2845	H1	H2O	554	-5.433	-5.940	58.470	1.00	0.00
	ATOM	2846	H2	H2O	554	-6.453	-6.976	58.404	1.00	0.00
	ATOM	2847	OH2	H2O	555	-26.688	-2.898	68.239	1.00	26.60
10	ATOM	2848	H1	H2O	555	-27.261	-2.128	68.123	1.00	0.00
	ATOM	2849	H2	H2O	555	-26.730	-3.318	67.372	1.00	0.00
	ATOM	2850	OH2	H2O	556	-27.507	-2.530	64.808	1.00	35.40
	ATOM	2851	H1	H2O	556	-26.716	-3.098	64.836	1.00	0.00
	ATOM	2852	H2	H2O	556	-27.089	-1.666	64.684	1.00	0.00
15	ATOM	2853	OH2	H2O	557	-3.466	0.091	55.103	1.00	31.58
	ATOM	2854	H1	H2O	557	-4.116	0.662	54.672	1.00	0.00
	ATOM	2855	H2	H2O	557	-3.730	0.129	56.022	1.00	0.00
	ATOM	2856	OH2	H2O	558	-17.363	11.081	48.313	1.00	34.37
	ATOM	2857	H1	H2O	558	-18.067	11.741	48.280	1.00	0.00
20	ATOM	2858	H2	H2O	558	-17.568	10.638	49.148	1.00	0.00
	ATOM	2859	OH2	H2O	559	-5.182	1.100	51.170	1.00	35.10
	ATOM	2860	H1	H2O	559	-6.102	0.891	50.910	1.00	0.00
	ATOM	2861	H2	H2O	559	-4.870	0.273	51.539	1.00	0.00
	ATOM	2862	OH2	H2O	560	-1.672	-2.171	49.168	1.00	30.93
25	ATOM	2863	H1	H2O	560	-1.378	-1.786	48.327	1.00	0.00
	ATOM	2864	H2	H2O	560	-1.186	-1.638	49.811	1.00	0.00
	ATOM	2865	OH2	H2O	561	-12.968	-16.434	50.268	1.00	38.85
	ATOM	2866	H1	H2O	561	-13.869	-16.305	49.955	1.00	0.00
	ATOM	2867	H2	H2O	561	-12.756	-15.504	50.450	1.00	0.00
30	ATOM	2868	OH2	H2O	563	8.438	5.804	48.097	1.00	48.55
	ATOM	2869	H1	H2O	563	7.987	5.826	48.951	1.00	0.00
	ATOM	2870	H2	H2O	563	9.187	6.397	48.249	1.00	0.00
	ATOM	2871	OH2	H2O	569	-18.518	8.907	70.572	1.00	33.67
	ATOM	2872	H1	H2O	569	-19.475	8.882	70.611	1.00	0.00
35	ATOM	2873	H2	H2O	569	-18.362	9.599	69.917	1.00	0.00
	ATOM	2874	OH2	H2O	570	-3.123	15.254	51.267	1.00	44.68
	ATOM	2875	H1	H2O	570	-2.857	15.725	50.474	1.00	0.00
	ATOM	2876	H2	H2O	570	-2.642	14.427	51.213	1.00	0.00
	ATOM	2877	OH2	H2O	572	-4.725	17.961	46.351	1.00	28.78

	ATOM	2878	H1	H2O	572	-5.641	18.255	46.416	1.00	0.00
	ATOM	2879	H2	H2O	572	-4.454	18.331	45.500	1.00	0.00
	ATOM	2880	OH2	H2O	573	-17.831	-26.994	47.079	1.00	47.81
	ATOM	2881	H1	H2O	573	-18.168	-27.861	47.345	1.00	0.00
5	ATOM	2882	H2	H2O	573	-16.954	-27.236	46.737	1.00	0.00
	ATOM	2883	OH2	H2O	574	-11.347	-10.955	43.461	1.00	27.59
	ATOM	2884	H1	H2O	574	-12.285	-11.031	43.636	1.00	0.00
	ATOM	2885	H2	H2O	574	-11.302	-10.452	42.652	1.00	0.00
	ATOM	2886	OH2	H2O	575	-7.797	6.237	24.140	1.00	43.37
10	ATOM	2887	H1	H2O	575	-8.151	5.827	23.336	1.00	0.00
	ATOM	2888	H2	H2O	575	-7.042	6.728	23.794	1.00	0.00
	ATOM	2889	OH2	H2O	576	-2.183	3.330	69.045	1.00	33.93
	ATOM	2890	H1	H2O	576	-3.094	3.131	68.802	1.00	0.00
	ATOM	2891	H2	H2O	576	-1.964	4.076	68.483	1.00	0.00
15	ATOM	2892	OH2	H2O	577	-0.855	-5.759	42.695	1.00	25.76
	ATOM	2893	H1	H2O	577	-1.157	-5.188	41.984	1.00	0.00
	ATOM	2894	H2	H2O	577	-0.947	-6.645	42.342	1.00	0.00
	ATOM	2895	OH2	H2O	579	3.333	6.242	53.401	1.00	50.25
	ATOM	2896	H1	H2O	579	3.451	5.332	53.701	1.00	0.00
20	ATOM	2897	H2	H2O	579	4.217	6.487	53.105	1.00	0.00
	ATOM	2898	OH2	H2O	580	-2.444	2.334	61.039	1.00	31.46
	ATOM	2899	H1	H2O	580	-3.317	2.148	61.413	1.00	0.00
	ATOM	2900	H2	H2O	580	-2.660	3.049	60.423	1.00	0.00
	ATOM	2901	OH2	H2O	581	-15.655	7.091	35.775	1.00	37.09
25	ATOM	2902	H1	H2O	581	-14.694	7.066	35.713	1.00	0.00
	ATOM	2903	H2	H2O	581	-15.902	6.185	35.548	1.00	0.00
	ATOM	2904	OH2	H2O	582	2.063	24.320	47.146	1.00	51.91
	ATOM	2905	H1	H2O	582	1.349	24.295	46.468	1.00	0.00
	ATOM	2906	H2	H2O	582	2.119	25.295	47.172	1.00	0.00
30	ATOM	2907	OH2	H2O	583	-6.779	-2.271	28.633	1.00	40.33
	ATOM	2908	H1	H2O	583	-6.999	-1.707	27.886	1.00	0.00
	ATOM	2909	H2	H2O	583	-7.664	-2.443	28.970	1.00	0.00
	ATOM	2910	OH2	H2O	584	11.799	8.386	47.735	1.00	53.26
	ATOM	2911	H1	H2O	584	12.475	8.197	47.055	1.00	0.00
35	ATOM	2912	H2	H2O	584	11.657	9.325	47.602	1.00	0.00
	ATOM	2913	OH2	H2O	585	-13.524	6.050	40.840	1.00	43.92
	ATOM	2914	H1	H2O	585	-12.588	5.799	40.707	1.00	0.00
	ATOM	2915	H2	H2O	585	-13.692	5.671	41.705	1.00	0.00
	ATOM	2916	OH2	H2O	586	-20.205	-18.799	46.340	1.00	35.53

	ATOM	2917	H1	H2O	586	-20.221	-18.803	47.304	1.00	0.00
	ATOM	2918	H2	H2O	586	-19.889	-17.914	46.132	1.00	0.00
	ATOM	2919	OH2	H2O	587	9.685	9.586	28.857	1.00	23.20
	ATOM	2920	H1	H2O	587	8.918	9.519	28.276	1.00	0.00
5	ATOM	2921	H2	H2O	587	10.422	9.526	28.241	1.00	0.00
	ATOM	2922	OH2	H2O	588	-18.278	15.597	52.143	1.00	37.65
	ATOM	2923	H1	H2O	588	-17.821	15.619	52.985	1.00	0.00
	ATOM	2924	H2	H2O	588	-18.442	14.652	52.046	1.00	0.00
	ATOM	2925	OH2	H2O	589	12.004	9.442	43.787	1.00	36.10
10	ATOM	2926	H1	H2O	589	11.783	9.993	43.008	1.00	0.00
	ATOM	2927	H2	H2O	589	12.929	9.683	43.951	1.00	0.00
	ATOM	2928	OH2	H2O	592	-25.871	-5.699	57.447	1.00	24.88
	ATOM	2929	H1	H2O	592	-26.445	-5.733	58.226	1.00	0.00
	ATOM	2930	H2	H2O	592	-25.440	-4.847	57.572	1.00	0.00
15	ATOM	2931	OH2	H2O	593	-13.120	10.109	38.496	1.00	33.36
	ATOM	2932	H1	H2O	593	-12.211	9.803	38.544	1.00	0.00
	ATOM	2933	H2	H2O	593	-13.553	9.578	39.173	1.00	0.00
	ATOM	2934	OH2	H2O	594	-2.642	17.050	48.010	1.00	31.60
	ATOM	2935	H1	H2O	594	-2.754	17.725	48.682	1.00	0.00
20	ATOM	2936	H2	H2O	594	-3.443	17.194	47.462	1.00	0.00
	ATOM	2937	OH2	H2O	595	13.645	7.886	45.763	1.00	41.58
	ATOM	2938	H1	H2O	595	14.505	7.762	46.191	1.00	0.00
	ATOM	2939	H2	H2O	595	13.921	7.739	44.837	1.00	0.00
	ATOM	2940	OH2	H2O	596	11.562	6.029	45.973	1.00	50.87
25	ATOM	2941	H1	H2O	596	11.768	5.826	46.893	1.00	0.00
	ATOM	2942	H2	H2O	596	12.242	6.714	45.805	1.00	0.00
	ATOM	2943	OH2	H2O	597	8.860	-0.601	32.747	1.00	41.20
	ATOM	2944	H1	H2O	597	8.422	-0.896	31.940	1.00	0.00
	ATOM	2945	H2	H2O	597	8.194	-0.773	33.420	1.00	0.00
30	ATOM	2946	OH2	H2O	598	14.739	10.248	44.027	1.00	61.01
	ATOM	2947	H1	H2O	598	14.760	11.112	43.590	1.00	0.00
	ATOM	2948	H2	H2O	598	15.049	10.456	44.920	1.00	0.00
	ATOM	2949	OH2	H2O	599	-14.758	-0.522	39.901	1.00	47.63
	ATOM	2950	H1	H2O	599	-15.399	-0.544	39.178	1.00	0.00
35	ATOM	2951	H2	H2O	599	-14.534	-1.454	39.996	1.00	0.00
	ATOM	2952	OH2	H2O	601	11.055	1.025	33.198	1.00	33.67
	ATOM	2953	H1	H2O	601	10.283	0.434	33.099	1.00	0.00
	ATOM	2954	H2	H2O	601	11.463	0.920	32.328	1.00	0.00
	ATOM	2955	OH2	H2O	602	-7.939	5.076	74.158	1.00	35.51

	ATOM	2956	H1	H2O	602	-7.267	5.133	74.849	1.00	0.00
	ATOM	2957	H2	H2O	602	-7.784	4.156	73.888	1.00	0.00
	ATOM	2958	OH2	H2O	603	-16.636	-12.874	62.037	1.00	36.29
	ATOM	2959	H1	H2O	603	-16.225	-13.402	61.337	1.00	0.00
5	ATOM	2960	H2	H2O	603	-15.849	-12.404	62.373	1.00	0.00
	ATOM	2961	OH2	H2O	604	-18.358	-20.653	39.617	1.00	36.43
	ATOM	2962	H1	H2O	604	-17.998	-20.559	40.507	1.00	0.00
	ATOM	2963	H2	H2O	604	-17.638	-20.311	39.059	1.00	0.00
	ATOM	2964	OH2	H2O	605	-5.855	-5.527	60.942	1.00	35.83
10	ATOM	2965	H1	H2O	605	-6.476	-5.558	60.199	1.00	0.00
	ATOM	2966	H2	H2O	605	-5.861	-4.592	61.176	1.00	0.00
	ATOM	2967	OH2	H2O	606	-7.119	-2.334	35.830	1.00	31.03
	ATOM	2968	H1	H2O	606	-7.787	-1.638	35.776	1.00	0.00
	ATOM	2969	H2	H2O	606	-7.562	-3.033	35.342	1.00	0.00
15	ATOM	2970	OH2	H2O	608	-4.292	10.348	58.969	1.00	59.16
	ATOM	2971	H1	H2O	608	-3.677	9.723	59.379	1.00	0.00
	ATOM	2972	H2	H2O	608	-3.683	10.944	58.518	1.00	0.00
	ATOM	2973	OH2	H2O	609	-4.131	23.593	29.611	1.00	48.52
	ATOM	2974	H1	H2O	609	-4.310	24.395	30.105	1.00	0.00
20	ATOM	2975	H2	H2O	609	-4.950	23.104	29.684	1.00	0.00
	ATOM	2976	OH2	H2O	610	-13.858	-29.598	37.538	1.00	34.23
	ATOM	2977	H1	H2O	610	-13.564	-29.123	38.335	1.00	0.00
	ATOM	2978	H2	H2O	610	-14.093	-30.430	37.979	1.00	0.00
	ATOM	2979	OH2	H2O	611	-20.921	-9.179	55.419	1.00	26.60
25	ATOM	2980	H1	H2O	611	-21.180	-9.388	56.337	1.00	0.00
	ATOM	2981	H2	H2O	611	-21.260	-9.951	54.942	1.00	0.00
	ATOM	2982	OH2	H2O	612	-26.331	-2.023	72.803	1.00	53.47
	ATOM	2983	H1	H2O	612	-26.140	-1.532	73.608	1.00	0.00
	ATOM	2984	H2	H2O	612	-27.255	-1.793	72.631	1.00	0.00
30	ATOM	2985	OH2	H2O	613	-13.525	13.983	37.069	1.00	50.82
	ATOM	2986	H1	H2O	613	-14.442	14.000	36.781	1.00	0.00
	ATOM	2987	H2	H2O	613	-13.355	13.043	37.165	1.00	0.00
	ATOM	2988	OH2	H2O	614	-21.926	16.371	65.955	1.00	46.58
	ATOM	2989	H1	H2O	614	-22.637	17.013	65.941	1.00	0.00
35	ATOM	2990	H2	H2O	614	-22.048	15.876	65.146	1.00	0.00
	ATOM	2991	OH2	H2O	615	1.690	-5.302	31.945	1.00	33.74
	ATOM	2992	H1	H2O	615	1.397	-6.113	31.506	1.00	0.00
	ATOM	2993	H2	H2O	615	2.121	-5.661	32.733	1.00	0.00
	ATOM	2994	OH2	H2O	616	-20.949	-21.416	38.360	1.00	46.62

	ATOM	2995	H1	H2O	616	-20.201	-21.991	38.548	1.00	0.00
	ATOM	2996	H2	H2O	616	-20.536	-20.560	38.533	1.00	0.00
	ATOM	2997	OH2	H2O	617	-12.061	10.750	73.270	1.00	33.05
	ATOM	2998	H1	H2O	617	-12.819	11.023	72.742	1.00	0.00
5	ATOM	2999	H2	H2O	617	-11.922	9.855	72.958	1.00	0.00
	ATOM	3000	OH2	H2O	618	-15.349	12.400	63.729	1.00	37.51
	ATOM	3001	H1	H2O	618	-15.377	11.908	62.908	1.00	0.00
	ATOM	3002	H2	H2O	618	-16.272	12.641	63.835	1.00	0.00
	ATOM	3003	OH2	H2O	619	0.949	7.386	53.643	1.00	49.12
10	ATOM	3004	H1	H2O	619	1.002	7.867	54.473	1.00	0.00
	ATOM	3005	H2	H2O	619	1.831	6.951	53.624	1.00	0.00
	ATOM	3006	OH2	H2O	620	-4.534	-8.391	59.287	1.00	32.23
	ATOM	3007	H1	H2O	620	-4.887	-9.282	59.417	1.00	0.00
	ATOM	3008	H2	H2O	620	-3.858	-8.571	58.625	1.00	0.00
15	ATOM	3009	OH2	H2O	621	-25.465	-6.264	54.211	1.00	48.91
	ATOM	3010	H1	H2O	621	-24.522	-6.048	54.259	1.00	0.00
	ATOM	3011	H2	H2O	621	-25.496	-6.709	53.362	1.00	0.00
	ATOM	3012	OH2	H2O	622	-28.810	-0.917	66.953	1.00	54.26
	ATOM	3013	H1	H2O	622	-28.968	-1.765	66.514	1.00	0.00
20	ATOM	3014	H2	H2O	622	-28.017	-0.623	66.496	1.00	0.00
	ATOM	3015	OH2	H2O	623	-1.838	20.090	25.125	1.00	53.05
	ATOM	3016	H1	H2O	623	-1.624	20.918	24.699	1.00	0.00
	ATOM	3017	H2	H2O	623	-2.056	19.496	24.392	1.00	0.00
	ATOM	3018	OH2	H2O	624	4.169	12.348	27.338	1.00	59.51
25	ATOM	3019	H1	H2O	624	3.885	11.758	26.634	1.00	0.00
	ATOM	3020	H2	H2O	624	3.382	12.887	27.475	1.00	0.00
	ATOM	3021	OH2	H2O	625	-20.172	-12.484	57.970	1.00	48.36
	ATOM	3022	H1	H2O	625	-20.919	-12.902	58.402	1.00	0.00
	ATOM	3023	H2	H2O	625	-19.544	-12.424	58.696	1.00	0.00
30	ATOM	3024	OH2	H2O	626	-2.341	-0.010	29.093	1.00	41.65
	ATOM	3025	H1	H2O	626	-2.634	-0.652	29.755	1.00	0.00
	ATOM	3026	H2	H2O	626	-1.592	-0.477	28.705	1.00	0.00
	ATOM	3027	OH2	H2O	627	-5.808	-1.656	39.529	1.00	30.08
	ATOM	3028	H1	H2O	627	-6.395	-1.472	38.788	1.00	0.00
35	ATOM	3029	H2	H2O	627	-5.340	-0.821	39.617	1.00	0.00
	END									

*Note: See copyright notice on page 1.

Appendix II: Coordinates for the 3D structure of ZAP-NC:z2*

REMARK FILENAME="tml-zeta2-wat1-slow.pdb"

5 REMARK TOPH19.pep -MACRO for protein sequence
created by user: marcos

	ATOM	1	CB	ASP	3	-1.930	-4.782	36.991	1.00	37.05
	ATOM	2	CG	ASP	3	-2.570	-3.408	37.176	1.00	38.16
	ATOM	3	OD1	ASP	3	-2.370	-2.527	36.311	1.00	37.36
10	ATOM	4	OD2	ASP	3	-3.265	-3.205	38.197	1.00	37.01
	ATOM	5	C	ASP	3	-2.096	-4.960	34.485	1.00	32.75
	ATOM	6	O	ASP	3	-0.916	-4.974	34.145	1.00	31.91
	ATOM	7	HT1	ASP	3	-1.022	-6.965	35.742	1.00	0.00
	ATOM	8	HT2	ASP	3	-2.470	-7.515	35.059	1.00	0.00
15	ATOM	9	N	ASP	3	-2.058	-6.982	35.850	1.00	39.84
	ATOM	10	HT3	ASP	3	-2.314	-7.428	36.750	1.00	0.00
	ATOM	11	CA	ASP	3	-2.531	-5.568	35.816	1.00	35.10
	ATOM	12	N	PRO	4	-3.057	-4.449	33.704	1.00	29.48
	ATOM	13	CD	PRO	4	-4.493	-4.558	34.013	1.00	31.76
20	ATOM	14	CA	PRO	4	-2.860	-3.823	32.394	1.00	27.70
	ATOM	15	CB	PRO	4	-4.273	-3.399	32.011	1.00	30.04
	ATOM	16	CG	PRO	4	-5.115	-4.444	32.653	1.00	32.47
	ATOM	17	C	PRO	4	-1.929	-2.616	32.393	1.00	26.07
	ATOM	18	O	PRO	4	-1.563	-2.119	31.324	1.00	27.89
25	ATOM	19	N	ALA	5	-1.585	-2.121	33.578	1.00	20.52
	ATOM	20	H	ALA	5	-1.962	-2.491	34.379	1.00	0.00
	ATOM	21	CA	ALA	5	-0.713	-0.963	33.682	1.00	15.66
	ATOM	22	CB	ALA	5	-1.363	0.104	34.546	1.00	12.37
	ATOM	23	C	ALA	5	0.662	-1.303	34.222	1.00	15.18
30	ATOM	24	O	ALA	5	1.560	-0.474	34.167	1.00	15.42
	ATOM	25	N	ALA	6	0.849	-2.545	34.663	1.00	17.31
	ATOM	26	H	ALA	6	0.133	-3.204	34.566	1.00	0.00
	ATOM	27	CA	ALA	6	2.118	-2.982	35.250	1.00	15.36
	ATOM	28	CB	ALA	6	2.037	-4.448	35.644	1.00	16.18
35	ATOM	29	C	ALA	6	3.373	-2.730	34.420	1.00	14.64
	ATOM	30	O	ALA	6	4.455	-2.560	34.970	1.00	15.69
	ATOM	31	N	HIS	7	3.238	-2.712	33.100	1.00	13.68
	ATOM	32	H	HIS	7	2.333	-2.845	32.758	1.00	0.00
	ATOM	33	CA	HIS	7	4.393	-2.487	32.234	1.00	11.91

	ATOM	34	CB	HIS	7	4.199	-3.186	30.884	1.00	11.56
	ATOM	35	CG	HIS	7	2.990	-2.727	30.134	1.00	6.98
	ATOM	36	CD2	HIS	7	2.861	-1.908	29.064	1.00	8.55
	ATOM	37	ND1	HIS	7	1.712	-3.118	30.470	1.00	6.26
5	ATOM	38	HD1	HIS	7	1.443	-3.762	31.161	1.00	0.00
	ATOM	39	CE1	HIS	7	0.848	-2.558	29.642	1.00	9.39
	ATOM	40	NE2	HIS	7	1.524	-1.820	28.778	1.00	9.77
	ATOM	41	HE2	HIS	7	1.115	-1.305	28.037	1.00	0.00
	ATOM	42	C	HIS	7	4.726	-1.012	32.019	1.00	11.78
10	ATOM	43	O	HIS	7	5.780	-0.688	31.479	1.00	15.61
	ATOM	44	N	LEU	8	3.821	-0.121	32.421	1.00	11.63
	ATOM	45	H	LEU	8	3.016	-0.410	32.904	1.00	0.00
	ATOM	46	CA	LEU	8	4.035	1.317	32.271	1.00	11.65
	ATOM	47	CB	LEU	8	2.733	2.076	32.536	1.00	12.00
15	ATOM	48	CG	LEU	8	1.807	2.318	31.340	1.00	14.44
	ATOM	49	CD1	LEU	8	2.031	1.303	30.248	1.00	14.24
	ATOM	50	CD2	LEU	8	0.373	2.309	31.804	1.00	13.16
	ATOM	51	C	LEU	8	5.129	1.799	33.213	1.00	10.74
	ATOM	52	O	LEU	8	5.059	1.576	34.419	1.00	13.97
20	ATOM	53	N	PRO	9	6.142	2.500	32.676	1.00	11.59
	ATOM	54	CD	PRO	9	6.257	2.872	31.256	1.00	10.31
	ATOM	55	CA	PRO	9	7.279	3.032	33.439	1.00	9.53
	ATOM	56	CB	PRO	9	8.087	3.778	32.373	1.00	10.55
	ATOM	57	CG	PRO	9	7.724	3.094	31.115	1.00	10.88
25	ATOM	58	C	PRO	9	6.867	3.997	34.548	1.00	8.58
	ATOM	59	O	PRO	9	7.567	4.134	35.550	1.00	10.26
	ATOM	60	N	PHE	10	5.752	4.688	34.340	1.00	7.17
	ATOM	61	H	PHE	10	5.256	4.547	33.516	1.00	0.00
	ATOM	62	CA	PHE	10	5.247	5.667	35.295	1.00	8.06
30	ATOM	63	CB	PHE	10	4.772	6.929	34.553	1.00	4.56
	ATOM	64	CG	PHE	10	3.822	6.646	33.425	1.00	6.98
	ATOM	65	CD1	PHE	10	2.445	6.666	33.629	1.00	7.37
	ATOM	66	CD2	PHE	10	4.308	6.349	32.152	1.00	6.47
	ATOM	67	CE1	PHE	10	1.563	6.390	32.578	1.00	8.56
35	ATOM	68	CE2	PHE	10	3.439	6.074	31.103	1.00	8.81
	ATOM	69	CZ	PHE	10	2.060	6.095	31.315	1.00	8.30
	ATOM	70	C	PHE	10	4.141	5.125	36.203	1.00	9.03
	ATOM	71	O	PHE	10	3.387	5.898	36.795	1.00	9.71
	ATOM	72	N	PHE	11	4.020	3.802	36.280	1.00	7.91

	ATOM	73	H	PHE	11	4.649	3.204	35.823	1.00	0.00
	ATOM	74	CA	PHE	11	3.026	3.166	37.137	1.00	7.22
	ATOM	75	CB	PHE	11	2.404	1.964	36.427	1.00	7.31
	ATOM	76	CG	PHE	11	1.383	1.237	37.251	1.00	5.77
5	ATOM	77	CD1	PHE	11	0.206	1.864	37.635	1.00	2.00
	ATOM	78	CD2	PHE	11	1.603	-0.078	37.642	1.00	2.95
	ATOM	79	CE1	PHE	11	-0.729	1.192	38.389	1.00	3.12
	ATOM	80	CE2	PHE	11	0.668	-0.761	38.401	1.00	2.87
	ATOM	81	CZ	PHE	11	-0.497	-0.130	38.775	1.00	2.00
10	ATOM	82	C	PHE	11	3.725	2.725	38.434	1.00	7.69
	ATOM	83	O	PHE	11	4.710	1.983	38.400	1.00	5.93
	ATOM	84	N	TYR	12	3.231	3.202	39.573	1.00	6.36
	ATOM	85	H	TYR	12	2.469	3.818	39.520	1.00	0.00
	ATOM	86	CA	TYR	12	3.836	2.870	40.860	1.00	5.86
15	ATOM	87	CB	TYR	12	3.996	4.130	41.706	1.00	7.27
	ATOM	88	CG	TYR	12	5.066	5.063	41.193	1.00	8.07
	ATOM	89	CD1	TYR	12	4.862	5.836	40.051	1.00	7.30
	ATOM	90	CE1	TYR	12	5.858	6.672	39.569	1.00	7.12
	ATOM	91	CD2	TYR	12	6.294	5.156	41.840	1.00	7.58
20	ATOM	92	CE2	TYR	12	7.289	5.987	41.367	1.00	7.70
	ATOM	93	CZ	TYR	12	7.063	6.740	40.234	1.00	8.65
	ATOM	94	OH	TYR	12	8.068	7.546	39.779	1.00	12.68
	ATOM	95	HH	TYR	12	8.910	7.326	40.171	1.00	0.00
	ATOM	96	C	TYR	12	3.114	1.805	41.662	1.00	5.87
25	ATOM	97	O	TYR	12	3.554	1.428	42.749	1.00	5.79
	ATOM	98	N	GLY	13	2.000	1.325	41.139	1.00	5.99
	ATOM	99	H	GLY	13	1.656	1.690	40.302	1.00	0.00
	ATOM	100	CA	GLY	13	1.262	0.299	41.842	1.00	11.58
	ATOM	101	C	GLY	13	0.420	0.849	42.974	1.00	13.90
30	ATOM	102	O	GLY	13	-0.098	1.960	42.888	1.00	13.74
	ATOM	103	N	SER	14	0.315	0.087	44.056	1.00	14.19
	ATOM	104	H	SER	14	0.788	-0.773	44.102	1.00	0.00
	ATOM	105	CA	SER	14	-0.496	0.492	45.190	1.00	15.17
	ATOM	106	CB	SER	14	-1.162	-0.737	45.810	1.00	14.68
35	ATOM	107	OG	SER	14	-2.009	-0.370	46.884	1.00	23.05
	ATOM	108	HG	SER	14	-1.439	-0.023	47.586	1.00	0.00
	ATOM	109	C	SER	14	0.210	1.316	46.265	1.00	16.00
	ATOM	110	O	SER	14	0.467	0.820	47.363	1.00	16.80
	ATOM	111	N	ILE	15	0.522	2.570	45.950	1.00	15.37

	ATOM	112	H	ILE	15	0.283	2.901	45.058	1.00	0.00
	ATOM	113	CA	ILE	15	1.159	3.467	46.914	1.00	12.48
	ATOM	114	CB	ILE	15	2.370	4.223	46.304	1.00	10.89
	ATOM	115	CG2	ILE	15	3.496	3.237	45.986	1.00	8.22
5	ATOM	116	CG1	ILE	15	1.945	5.032	45.074	1.00	7.10
	ATOM	117	CD	ILE	15	3.062	5.887	44.496	1.00	2.93
	ATOM	118	C	ILE	15	0.120	4.473	47.426	1.00	12.27
	ATOM	119	O	ILE	15	-0.990	4.555	46.889	1.00	11.25
	ATOM	120	N	SER	16	0.469	5.233	48.459	1.00	8.90
10	ATOM	121	H	SER	16	1.358	5.201	48.836	1.00	0.00
	ATOM	122	CA	SER	16	-0.459	6.215	49.010	1.00	10.27
	ATOM	123	CB	SER	16	-0.231	6.398	50.512	1.00	7.24
	ATOM	124	OG	SER	16	1.051	6.950	50.758	1.00	11.57
	ATOM	125	HG	SER	16	1.119	7.092	51.719	1.00	0.00
15	ATOM	126	C	SER	16	-0.267	7.549	48.316	1.00	8.08
	ATOM	127	O	SER	16	0.727	7.753	47.608	1.00	5.74
	ATOM	128	N	ARG	17	-1.209	8.461	48.549	1.00	8.03
	ATOM	129	H	ARG	17	-1.975	8.225	49.117	1.00	0.00
	ATOM	130	CA	ARG	17	-1.137	9.792	47.969	1.00	7.35
20	ATOM	131	CB	ARG	17	-2.328	10.640	48.407	1.00	6.44
	ATOM	132	CG	ARG	17	-2.230	12.078	47.919	1.00	5.73
	ATOM	133	CD	ARG	17	-3.359	12.936	48.428	1.00	7.10
	ATOM	134	NE	ARG	17	-4.651	12.497	47.919	1.00	10.08
	ATOM	135	HE	ARG	17	-4.764	11.542	47.799	1.00	0.00
25	ATOM	136	CZ	ARG	17	-5.667	13.308	47.651	1.00	12.64
	ATOM	137	NH1	ARG	17	-5.547	14.615	47.839	1.00	14.72
	ATOM	138	HH11	ARG	17	-4.683	14.986	48.174	1.00	0.00
	ATOM	139	HH12	ARG	17	-6.311	15.229	47.642	1.00	0.00
	ATOM	140	NH2	ARG	17	-6.807	12.807	47.199	1.00	14.47
30	ATOM	141	HH21	ARG	17	-6.903	11.820	47.061	1.00	0.00
	ATOM	142	HH22	ARG	17	-7.576	13.416	47.005	1.00	0.00
	ATOM	143	C	ARG	17	0.142	10.462	48.432	1.00	7.25
	ATOM	144	O	ARG	17	0.814	11.133	47.657	1.00	11.16
	ATOM	145	N	ALA	18	0.470	10.286	49.704	1.00	8.87
35	ATOM	146	H	ALA	18	-0.131	9.780	50.291	1.00	0.00
	ATOM	147	CA	ALA	18	1.674	10.877	50.267	1.00	7.33
	ATOM	148	CB	ALA	18	1.787	10.544	51.747	1.00	12.14
	ATOM	149	C	ALA	18	2.904	10.405	49.526	1.00	7.31
	ATOM	150	O	ALA	18	3.764	11.209	49.168	1.00	8.68

	ATOM	151	N	GLU	19	2.987	9.100	49.292	1.00	8.47
	ATOM	152	H	GLU	19	2.260	8.510	49.603	1.00	0.00
	ATOM	153	CA	GLU	19	4.127	8.530	48.580	1.00	7.37
	ATOM	154	CB	GLU	19	4.061	7.005	48.589	1.00	9.12
5	ATOM	155	CG	GLU	19	4.085	6.415	49.986	1.00	18.39
	ATOM	156	CD	GLU	19	3.901	4.909	50.005	1.00	18.70
	ATOM	157	OE1	GLU	19	4.912	4.190	50.112	1.00	27.52
	ATOM	158	OE2	GLU	19	2.748	4.439	49.931	1.00	16.92
	ATOM	159	C	GLU	19	4.166	9.050	47.150	1.00	8.14
10	ATOM	160	O	GLU	19	5.239	9.289	46.596	1.00	8.18
	ATOM	161	N	ALA	20	2.987	9.229	46.560	1.00	8.26
	ATOM	162	H	ALA	20	2.170	9.017	47.052	1.00	0.00
	ATOM	163	CA	ALA	20	2.882	9.738	45.197	1.00	9.21
	ATOM	164	CB	ALA	20	1.432	9.702	44.731	1.00	7.13
15	ATOM	165	C	ALA	20	3.421	11.165	45.122	1.00	7.93
	ATOM	166	O	ALA	20	4.178	11.510	44.216	1.00	7.73
	ATOM	167	N	GLU	21	3.042	11.981	46.097	1.00	8.72
	ATOM	168	H	GLU	21	2.458	11.637	46.807	1.00	0.00
	ATOM	169	CA	GLU	21	3.474	13.371	46.142	1.00	8.14
20	ATOM	170	CB	GLU	21	2.621	14.156	47.132	1.00	3.54
	ATOM	171	CG	GLU	21	1.166	14.213	46.698	1.00	4.77
	ATOM	172	CD	GLU	21	0.276	15.052	47.594	1.00	3.41
	ATOM	173	OE1	GLU	21	-0.882	15.278	47.213	1.00	3.53
	ATOM	174	OE2	GLU	21	0.716	15.489	48.674	1.00	8.91
25	ATOM	175	C	GLU	21	4.960	13.520	46.434	1.00	7.55
	ATOM	176	O	GLU	21	5.595	14.470	45.982	1.00	10.13
	ATOM	177	N	GLU	22	5.521	12.563	47.159	1.00	6.89
	ATOM	178	H	GLU	22	4.964	11.853	47.531	1.00	0.00
	ATOM	179	CA	GLU	22	6.941	12.584	47.458	1.00	7.66
30	ATOM	180	CB	GLU	22	7.291	11.489	48.465	1.00	9.80
	ATOM	181	CG	GLU	22	8.772	11.140	48.465	1.00	20.65
	ATOM	182	CD	GLU	22	9.231	10.377	49.691	1.00	26.23
	ATOM	183	OE1	GLU	22	8.381	9.865	50.457	1.00	27.98
	ATOM	184	OE2	GLU	22	10.461	10.304	49.887	1.00	27.22
35	ATOM	185	C	GLU	22	7.754	12.407	46.173	1.00	8.48
	ATOM	186	O	GLU	22	8.739	13.111	45.949	1.00	11.39
	ATOM	187	N	HIS	23	7.330	11.473	45.326	1.00	10.23
	ATOM	188	H	HIS	23	6.513	10.983	45.570	1.00	0.00
	ATOM	189	CA	HIS	23	8.009	11.199	44.060	1.00	7.78

	ATOM	190	CB	HIS	23	7.420	9.954	43.388	1.00	6.65
	ATOM	191	CG	HIS	23	7.813	8.667	44.047	1.00	7.16
	ATOM	192	CD2	HIS	23	9.015	8.056	44.166	1.00	5.40
	ATOM	193	ND1	HIS	23	6.902	7.835	44.661	1.00	9.76
5	ATOM	194	HD1	HIS	23	5.953	8.008	44.836	1.00	0.00
	ATOM	195	CE1	HIS	23	7.522	6.767	45.125	1.00	5.88
	ATOM	196	NE2	HIS	23	8.808	6.879	44.838	1.00	7.20
	ATOM	197	HE2	HIS	23	9.497	6.257	45.178	1.00	0.00
	ATOM	198	C	HIS	23	7.923	12.380	43.102	1.00	7.58
10	ATOM	199	O	HIS	23	8.893	12.698	42.412	1.00	9.48
	ATOM	200	N	LEU	24	6.758	13.016	43.049	1.00	8.34
	ATOM	201	H	LEU	24	6.007	12.724	43.606	1.00	0.00
	ATOM	202	CA	LEU	24	6.551	14.164	42.174	1.00	6.84
	ATOM	203	CB	LEU	24	5.062	14.527	42.112	1.00	5.05
15	ATOM	204	CG	LEU	24	4.140	13.522	41.392	1.00	9.41
	ATOM	205	CD1	LEU	24	2.672	13.866	41.630	1.00	2.00
	ATOM	206	CD2	LEU	24	4.441	13.479	39.889	1.00	2.21
	ATOM	207	C	LEU	24	7.401	15.340	42.654	1.00	8.80
	ATOM	208	O	LEU	24	7.973	16.072	41.843	1.00	10.47
20	ATOM	209	N	LYS	25	7.521	15.497	43.969	1.00	9.78
	ATOM	210	H	LYS	25	7.026	14.908	44.577	1.00	0.00
	ATOM	211	CA	LYS	25	8.343	16.562	44.540	1.00	10.08
	ATOM	212	CB	LYS	25	8.178	16.621	46.058	1.00	8.96
	ATOM	213	CG	LYS	25	6.849	17.130	46.550	1.00	3.65
25	ATOM	214	CD	LYS	25	6.863	17.140	48.059	1.00	10.29
	ATOM	215	CE	LYS	25	5.533	17.549	48.656	1.00	9.07
	ATOM	216	NZ	LYS	25	5.612	17.513	50.147	1.00	12.20
	ATOM	217	HZ1	LYS	25	6.355	18.162	50.481	1.00	0.00
	ATOM	218	HZ2	LYS	25	5.830	16.546	50.457	1.00	0.00
30	ATOM	219	HZ3	LYS	25	4.697	17.805	50.540	1.00	0.00
	ATOM	220	C	LYS	25	9.815	16.312	44.214	1.00	11.23
	ATOM	221	O	LYS	25	10.518	17.204	43.741	1.00	11.13
	ATOM	222	N	LEU	26	10.274	15.086	44.450	1.00	12.69
	ATOM	223	H	LEU	26	9.655	14.414	44.817	1.00	0.00
35	ATOM	224	CA	LEU	26	11.664	14.721	44.188	1.00	11.54
	ATOM	225	CB	LEU	26	11.967	13.322	44.730	1.00	9.05
	ATOM	226	CG	LEU	26	12.030	13.127	46.241	1.00	7.75
	ATOM	227	CD1	LEU	26	12.144	11.659	46.545	1.00	10.85
	ATOM	228	CD2	LEU	26	13.196	13.880	46.822	1.00	8.02

	ATOM	229	C	LEU	26	12.016	14.770	42.709	1.00	13.09
	ATOM	230	O	LEU	26	13.194	14.788	42.353	1.00	13.85
	ATOM	231	N	ALA	27	10.998	14.768	41.852	1.00	14.57
	ATOM	232	H	ALA	27	10.076	14.716	42.182	1.00	0.00
5	ATOM	233	CA	ALA	27	11.207	14.809	40.409	1.00	14.74
	ATOM	234	CB	ALA	27	10.114	14.036	39.690	1.00	11.97
	ATOM	235	C	ALA	27	11.310	16.217	39.847	1.00	14.47
	ATOM	236	O	ALA	27	11.450	16.388	38.637	1.00	18.58
	ATOM	237	N	GLY	28	11.214	17.228	40.701	1.00	14.44
10	ATOM	238	H	GLY	28	11.100	17.075	41.663	1.00	0.00
	ATOM	239	CA	GLY	28	11.322	18.588	40.208	1.00	16.06
	ATOM	240	C	GLY	28	10.059	19.417	40.277	1.00	18.17
	ATOM	241	O	GLY	28	10.121	20.638	40.125	1.00	20.12
	ATOM	242	N	SEM	29	8.911	18.764	40.445	1.00	18.95
15	ATOM	243	H	SEM	29	8.916	17.783	40.530	1.00	0.00
	ATOM	244	CA	SEM	29	7.633	19.461	40.560	1.00	19.29
	ATOM	245	CB	SEM	29	7.691	20.394	41.774	1.00	26.13
	ATOM	246	CG	SEM	29	6.357	20.714	42.386	1.00	38.67
	ATOM	247	A	SEM	29	5.628	19.139	43.253	1.00	56.20
20	ATOM	248	CE	SEM	29	4.244	20.250	43.984	1.00	49.18
	ATOM	249	C	SEM	29	7.244	20.262	39.307	1.00	17.59
	ATOM	250	O	SEM	29	6.551	21.277	39.404	1.00	14.79
	ATOM	251	N	ALA	30	7.661	19.799	38.132	1.00	17.50
	ATOM	252	H	ALA	30	8.158	18.959	38.095	1.00	0.00
25	ATOM	253	CA	ALA	30	7.361	20.506	36.883	1.00	17.68
	ATOM	254	CB	ALA	30	8.328	20.078	35.787	1.00	17.19
	ATOM	255	C	ALA	30	5.920	20.303	36.427	1.00	18.58
	ATOM	256	O	ALA	30	5.336	19.246	36.667	1.00	20.12
	ATOM	257	N	ASP	31	5.345	21.323	35.786	1.00	19.30
30	ATOM	258	H	ASP	31	5.870	22.127	35.608	1.00	0.00
	ATOM	259	CA	ASP	31	3.967	21.251	35.287	1.00	18.84
	ATOM	260	CB	ASP	31	3.556	22.553	34.585	1.00	22.71
	ATOM	261	CG	ASP	31	3.270	23.682	35.550	1.00	26.71
	ATOM	262	OD1	ASP	31	3.279	24.850	35.109	1.00	32.54
35	ATOM	263	OD2	ASP	31	3.023	23.415	36.744	1.00	30.87
	ATOM	264	C	ASP	31	3.822	20.110	34.298	1.00	15.55
	ATOM	265	O	ASP	31	4.678	19.920	33.434	1.00	13.41
	ATOM	266	N	GLY	32	2.727	19.371	34.413	1.00	13.36
	ATOM	267	H	GLY	32	2.082	19.548	35.121	1.00	0.00

	ATOM	268	CA	GLY	32	2.500	18.261	33.513	1.00	10.92
	ATOM	269	C	GLY	32	3.215	17.002	33.956	1.00	10.21
	ATOM	270	O	GLY	32	3.189	16.002	33.241	1.00	12.71
	ATOM	271	N	LEU	33	3.920	17.063	35.084	1.00	10.73
5	ATOM	272	H	LEU	33	3.996	17.913	35.563	1.00	0.00
	ATOM	273	CA	LEU	33	4.608	15.889	35.621	1.00	10.86
	ATOM	274	CB	LEU	33	5.587	16.297	36.730	1.00	10.14
	ATOM	275	CG	LEU	33	6.506	15.217	37.309	1.00	8.41
	ATOM	276	CD1	LEU	33	7.578	14.842	36.312	1.00	8.33
10	ATOM	277	CD2	LEU	33	7.146	15.735	38.564	1.00	4.68
	ATOM	278	C	LEU	33	3.486	15.015	36.193	1.00	11.04
	ATOM	279	O	LEU	33	2.665	15.495	36.987	1.00	10.22
	ATOM	280	N	PHE	34	3.431	13.751	35.786	1.00	8.86
	ATOM	281	H	PHE	34	4.113	13.400	35.173	1.00	0.00
15	ATOM	282	CA	PHE	34	2.369	12.868	36.247	1.00	6.90
	ATOM	283	CB	PHE	34	1.236	12.837	35.210	1.00	5.89
	ATOM	284	CG	PHE	34	1.587	12.101	33.941	1.00	7.44
	ATOM	285	CD1	PHE	34	1.247	10.755	33.784	1.00	8.28
	ATOM	286	CD2	PHE	34	2.259	12.746	32.905	1.00	3.28
20	ATOM	287	CE1	PHE	34	1.575	10.066	32.615	1.00	10.52
	ATOM	288	CE2	PHE	34	2.587	12.070	31.739	1.00	5.20
	ATOM	289	CZ	PHE	34	2.247	10.727	31.589	1.00	7.45
	ATOM	290	C	PHE	34	2.820	11.446	36.510	1.00	6.42
	ATOM	291	O	PHE	34	3.861	11.003	36.026	1.00	7.20
25	ATOM	292	N	LEU	35	2.015	10.724	37.273	1.00	5.42
	ATOM	293	H	LEU	35	1.189	11.106	37.637	1.00	0.00
	ATOM	294	CA	LEU	35	2.294	9.328	37.564	1.00	5.16
	ATOM	295	CB	LEU	35	3.228	9.170	38.780	1.00	3.91
	ATOM	296	CG	LEU	35	2.861	9.681	40.178	1.00	5.75
30	ATOM	297	CD1	LEU	35	1.822	8.770	40.833	1.00	3.81
	ATOM	298	CD2	LEU	35	4.125	9.730	41.033	1.00	5.45
	ATOM	299	C	LEU	35	0.950	8.638	37.759	1.00	5.01
	ATOM	300	O	LEU	35	-0.071	9.297	37.976	1.00	4.17
	ATOM	301	N	LEU	36	0.947	7.321	37.628	1.00	5.84
35	ATOM	302	H	LEU	36	1.787	6.845	37.447	1.00	0.00
	ATOM	303	CA	LEU	36	-0.266	6.543	37.772	1.00	6.22
	ATOM	304	CB	LEU	36	-0.513	5.745	36.487	1.00	8.32
	ATOM	305	CG	LEU	36	-1.945	5.377	36.090	1.00	12.01
	ATOM	306	CD1	LEU	36	-2.670	6.628	35.627	1.00	9.93

	ATOM	307	CD2	LEU	36	-1.924	4.333	34.975	1.00	11.40
	ATOM	308	C	LEU	36	-0.093	5.587	38.942	1.00	5.04
	ATOM	309	O	LEU	36	1.002	5.075	39.178	1.00	4.23
	ATOM	310	N	ARG	37	-1.156	5.396	39.712	1.00	5.30
5	ATOM	311	H	ARG	37	-1.991	5.875	39.531	1.00	0.00
	ATOM	312	CA	ARG	37	-1.122	4.469	40.837	1.00	4.66
	ATOM	313	CB	ARG	37	-0.845	5.190	42.156	1.00	3.66
	ATOM	314	CG	ARG	37	-1.713	6.381	42.403	1.00	2.00
	ATOM	315	CD	ARG	37	-1.287	7.057	43.664	1.00	2.41
10	ATOM	316	NE	ARG	37	-1.942	8.346	43.828	1.00	2.04
	ATOM	317	HE	ARG	37	-1.677	9.086	43.246	1.00	0.00
	ATOM	318	CZ	ARG	37	-2.891	8.584	44.719	1.00	3.03
	ATOM	319	NH1	ARG	37	-3.308	7.614	45.526	1.00	2.03
	ATOM	320	HH11	ARG	37	-2.923	6.697	45.464	1.00	0.00
15	ATOM	321	HH12	ARG	37	-4.022	7.812	46.194	1.00	0.00
	ATOM	322	NH2	ARG	37	-3.400	9.798	44.824	1.00	2.00
	ATOM	323	HH21	ARG	37	-3.054	10.515	44.228	1.00	0.00
	ATOM	324	HH22	ARG	37	-4.109	9.997	45.488	1.00	0.00
	ATOM	325	C	ARG	37	-2.443	3.732	40.884	1.00	3.21
20	ATOM	326	O	ARG	37	-3.387	4.105	40.195	1.00	4.62
	ATOM	327	N	GLN	38	-2.496	2.657	41.652	1.00	5.11
	ATOM	328	H	GLN	38	-1.732	2.444	42.213	1.00	0.00
	ATOM	329	CA	GLN	38	-3.708	1.858	41.758	1.00	8.69
	ATOM	330	CB	GLN	38	-3.356	0.428	42.169	1.00	9.37
25	ATOM	331	CG	GLN	38	-4.540	-0.505	42.289	1.00	12.33
	ATOM	332	CD	GLN	38	-4.101	-1.914	42.594	1.00	16.53
	ATOM	333	OE1	GLN	38	-3.915	-2.283	43.750	1.00	20.00
	ATOM	334	NE2	GLN	38	-3.892	-2.698	41.555	1.00	19.17
	ATOM	335	HE21	GLN	38	-4.078	-2.315	40.666	1.00	0.00
30	ATOM	336	HE22	GLN	38	-3.579	-3.605	41.714	1.00	0.00
	ATOM	337	C	GLN	38	-4.649	2.483	42.772	1.00	8.28
	ATOM	338	O	GLN	38	-4.209	2.975	43.802	1.00	11.23
	ATOM	339	N	CYS	39	-5.938	2.477	42.469	1.00	8.89
	ATOM	340	H	CYS	39	-6.237	2.044	41.640	1.00	0.00
35	ATOM	341	CA	CYS	39	-6.933	3.049	43.361	1.00	8.08
	ATOM	342	CB	CYS	39	-8.266	3.168	42.638	1.00	5.67
	ATOM	343	SG	CYS	39	-9.520	4.051	43.539	1.00	10.90
	ATOM	344	C	CYS	39	-7.085	2.150	44.577	1.00	9.83
	ATOM	345	O	CYS	39	-7.116	0.921	44.451	1.00	7.19

	ATOM	346	N	LEU	40	-7.158	2.768	45.750	1.00	7.63
	ATOM	347	H	LEU	40	-7.089	3.751	45.775	1.00	0.00
	ATOM	348	CA	LEU	40	-7.310	2.036	46.994	1.00	9.31
	ATOM	349	CB	LEU	40	-6.505	2.722	48.103	1.00	9.89
5	ATOM	350	CG	LEU	40	-4.997	2.799	47.891	1.00	9.01
	ATOM	351	CD1	LEU	40	-4.374	3.725	48.921	1.00	11.37
	ATOM	352	CD2	LEU	40	-4.388	1.407	47.975	1.00	9.89
	ATOM	353	C	LEU	40	-8.774	1.974	47.405	1.00	9.85
	ATOM	354	O	LEU	40	-9.115	1.337	48.399	1.00	11.71
10	ATOM	355	N	ARG	41	-9.638	2.622	46.633	1.00	9.83
	ATOM	356	H	ARG	41	-9.326	3.073	45.825	1.00	0.00
	ATOM	357	CA	ARG	41	-11.060	2.681	46.952	1.00	9.49
	ATOM	358	CB	ARG	41	-11.519	4.138	47.000	1.00	8.44
	ATOM	359	CG	ARG	41	-10.675	5.023	47.900	1.00	5.66
15	ATOM	360	CD	ARG	41	-11.147	6.449	47.830	1.00	8.87
	ATOM	361	NE	ARG	41	-11.038	6.990	46.481	1.00	11.49
	ATOM	362	HE	ARG	41	-10.148	7.039	46.102	1.00	0.00
	ATOM	363	CZ	ARG	41	-12.057	7.468	45.775	1.00	13.34
	ATOM	364	NH1	ARG	41	-13.280	7.483	46.280	1.00	15.40
20	ATOM	365	HH11	ARG	41	-13.439	7.153	47.206	1.00	0.00
	ATOM	366	HH12	ARG	41	-14.048	7.854	45.750	1.00	0.00
	ATOM	367	NH2	ARG	41	-11.851	7.937	44.555	1.00	14.77
	ATOM	368	HH21	ARG	41	-10.937	7.928	44.156	1.00	0.00
	ATOM	369	HH22	ARG	41	-12.626	8.289	44.031	1.00	0.00
25	ATOM	370	C	ARG	41	-11.990	1.898	46.042	1.00	9.85
	ATOM	371	O	ARG	41	-13.110	1.581	46.434	1.00	8.69
	ATOM	372	N	SER	42	-11.550	1.604	44.827	1.00	10.68
	ATOM	373	H	SER	42	-10.650	1.838	44.525	1.00	0.00
	ATOM	374	CA	SER	42	-12.389	0.859	43.902	1.00	12.49
30	ATOM	375	CB	SER	42	-12.866	1.763	42.764	1.00	12.46
	ATOM	376	OG	SER	42	-11.774	2.306	42.050	1.00	17.74
	ATOM	377	HG	SER	42	-12.149	3.093	41.607	1.00	0.00
	ATOM	378	C	SER	42	-11.651	-0.349	43.352	1.00	14.30
	ATOM	379	O	SER	42	-10.457	-0.528	43.600	1.00	14.79
35	ATOM	380	N	LEU	43	-12.381	-1.209	42.654	1.00	14.42
	ATOM	381	H	LEU	43	-13.322	-1.022	42.491	1.00	0.00
	ATOM	382	CA	LEU	43	-11.795	-2.400	42.062	1.00	14.72
	ATOM	383	CB	LEU	43	-12.800	-3.556	42.094	1.00	15.93
	ATOM	384	CG	LEU	43	-13.008	-4.241	43.445	1.00	17.87

	ATOM	385	CD1	LEU	43	-14.314	-5.017	43.441	1.00	18.61
	ATOM	386	CD2	LEU	43	-11.835	-5.158	43.740	1.00	19.73
	ATOM	387	C	LEU	43	-11.390	-2.091	40.623	1.00	14.52
	ATOM	388	O	LEU	43	-12.165	-1.496	39.867	1.00	14.42
5	ATOM	389	N	GLY	44	-10.148	-2.418	40.283	1.00	15.19
	ATOM	390	H	GLY	44	-9.563	-2.772	40.986	1.00	0.00
	ATOM	391	CA	GLY	44	-9.646	-2.186	38.938	1.00	13.99
	ATOM	392	C	GLY	44	-9.496	-0.733	38.533	1.00	11.65
	ATOM	393	O	GLY	44	-9.353	-0.434	37.353	1.00	15.02
10	ATOM	394	N	GLY	45	-9.489	0.170	39.503	1.00	9.86
	ATOM	395	H	GLY	45	-9.551	-0.116	40.434	1.00	0.00
	ATOM	396	CA	GLY	45	-9.360	1.580	39.192	1.00	5.54
	ATOM	397	C	GLY	45	-7.943	2.071	39.371	1.00	5.84
	ATOM	398	O	GLY	45	-7.088	1.360	39.899	1.00	6.52
15	ATOM	399	N	TYR	46	-7.705	3.312	38.978	1.00	5.35
	ATOM	400	H	TYR	46	-8.441	3.865	38.629	1.00	0.00
	ATOM	401	CA	TYR	46	-6.389	3.916	39.077	1.00	5.58
	ATOM	402	CB	TYR	46	-5.709	3.954	37.694	1.00	5.14
	ATOM	403	CG	TYR	46	-5.371	2.597	37.127	1.00	6.25
20	ATOM	404	CD1	TYR	46	-4.305	1.853	37.634	1.00	7.73
	ATOM	405	CE1	TYR	46	-4.046	0.573	37.177	1.00	7.63
	ATOM	406	CD2	TYR	46	-6.157	2.024	36.136	1.00	8.86
	ATOM	407	CE2	TYR	46	-5.905	0.743	35.670	1.00	7.09
	ATOM	408	CZ	TYR	46	-4.858	0.024	36.197	1.00	9.65
25	ATOM	409	OH	TYR	46	-4.640	-1.262	35.765	1.00	14.03
	ATOM	410	HH	TYR	46	-4.204	-1.681	36.505	1.00	0.00
	ATOM	411	C	TYR	46	-6.548	5.339	39.564	1.00	6.00
	ATOM	412	O	TYR	46	-7.667	5.816	39.748	1.00	5.33
	ATOM	413	N	VAL	47	-5.429	5.988	39.840	1.00	3.93
30	ATOM	414	H	VAL	47	-4.562	5.532	39.759	1.00	0.00
	ATOM	415	CA	VAL	47	-5.440	7.384	40.223	1.00	6.45
	ATOM	416	CB	VAL	47	-5.152	7.623	41.720	1.00	5.21
	ATOM	417	CG1	VAL	47	-5.289	9.116	42.024	1.00	2.00
	ATOM	418	CG2	VAL	47	-6.108	6.824	42.591	1.00	2.00
35	ATOM	419	C	VAL	47	-4.333	8.033	39.398	1.00	6.52
	ATOM	420	O	VAL	47	-3.225	7.504	39.323	1.00	5.99
	ATOM	421	N	LEU	48	-4.672	9.119	38.710	1.00	8.11
	ATOM	422	H	LEU	48	-5.588	9.443	38.750	1.00	0.00
	ATOM	423	CA	LEU	48	-3.720	9.870	37.903	1.00	8.79

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	ATOM	424	CB	LEU	48	-4.418	10.427	36.658	1.00	12.43
	ATOM	425	CG	LEU	48	-3.677	10.764	35.353	1.00	14.11
	ATOM	426	CD1	LEU	48	-4.438	11.888	34.674	1.00	14.34
	ATOM	427	CD2	LEU	48	-2.240	11.183	35.576	1.00	10.17
5	ATOM	428	C	LEU	48	-3.277	11.039	38.779	1.00	11.50
	ATOM	429	O	LEU	48	-4.102	11.873	39.162	1.00	9.63
	ATOM	430	N	SER	49	-1.998	11.078	39.139	1.00	11.61
	ATOM	431	H	SER	49	-1.392	10.383	38.818	1.00	0.00
	ATOM	432	CA	SER	49	-1.479	12.166	39.960	1.00	8.18
10	ATOM	433	CB	SER	49	-0.683	11.611	41.144	1.00	7.55
	ATOM	434	OG	SER	49	-1.495	10.791	41.969	1.00	3.18
	ATOM	435	HG	SER	49	-1.674	10.001	41.438	1.00	0.00
	ATOM	436	C	SER	49	-0.595	13.083	39.108	1.00	9.13
	ATOM	437	O	SER	49	0.371	12.625	38.498	1.00	10.70
15	ATOM	438	N	LEU	50	-0.951	14.363	39.031	1.00	10.96
	ATOM	439	H	LEU	50	-1.751	14.686	39.502	1.00	0.00
	ATOM	440	CA	LEU	50	-0.170	15.315	38.252	1.00	12.63
	ATOM	441	CB	LEU	50	-0.735	15.498	36.827	1.00	16.12
	ATOM	442	CG	LEU	50	-2.127	15.995	36.426	1.00	17.82
20	ATOM	443	CD1	LEU	50	-3.182	15.206	37.167	1.00	23.32
	ATOM	444	CD2	LEU	50	-2.275	17.479	36.672	1.00	17.92
	ATOM	445	C	LEU	50	0.064	16.657	38.929	1.00	11.83
	ATOM	446	O	LEU	50	-0.663	17.056	39.845	1.00	8.52
	ATOM	447	N	VAL	51	1.099	17.343	38.467	1.00	10.51
25	ATOM	448	H	VAL	51	1.613	16.980	37.717	1.00	0.00
	ATOM	449	CA	VAL	51	1.471	18.635	39.007	1.00	10.18
	ATOM	450	CB	VAL	51	3.000	18.704	39.283	1.00	9.58
	ATOM	451	CG1	VAL	51	3.369	20.031	39.938	1.00	5.85
	ATOM	452	CG2	VAL	51	3.445	17.520	40.138	1.00	8.60
30	ATOM	453	C	VAL	51	1.111	19.758	38.046	1.00	10.79
	ATOM	454	O	VAL	51	1.283	19.637	36.833	1.00	11.95
	ATOM	455	N	HIS	52	0.545	20.823	38.591	1.00	10.19
	ATOM	456	H	HIS	52	0.343	20.832	39.556	1.00	0.00
	ATOM	457	CA	HIS	52	0.231	22.005	37.814	1.00	13.16
35	ATOM	458	CB	HIS	52	-1.148	21.937	37.167	1.00	16.99
	ATOM	459	CG	HIS	52	-1.460	23.127	36.308	1.00	19.12
	ATOM	460	CD2	HIS	52	-2.483	24.011	36.344	1.00	19.25
	ATOM	461	ND1	HIS	52	-0.645	23.530	35.269	1.00	21.39
	ATOM	462	HD1	HIS	52	0.164	23.066	34.951	1.00	0.00

	ATOM	463	CE1	HIS	52	-1.154	24.607	34.702	1.00	18.57
	ATOM	464	NE2	HIS	52	-2.271	24.919	35.335	1.00	20.49
	ATOM	465	HE2	HIS	52	-2.880	25.642	35.070	1.00	0.00
	ATOM	466	C	HIS	52	0.285	23.137	38.813	1.00	14.35
5	ATOM	467	O	HIS	52	-0.304	23.033	39.884	1.00	14.87
	ATOM	468	N	ASP	53	1.035	24.186	38.487	1.00	18.31
	ATOM	469	H	ASP	53	1.499	24.235	37.643	1.00	0.00
	ATOM	470	CA	ASP	53	1.182	25.341	39.370	1.00	21.21
	ATOM	471	CB	ASP	53	-0.156	26.062	39.523	1.00	25.36
10	ATOM	472	CG	ASP	53	-0.260	27.272	38.643	1.00	33.50
	ATOM	473	OD1	ASP	53	-0.918	27.174	37.586	1.00	39.21
	ATOM	474	OD2	ASP	53	0.314	28.321	39.016	1.00	35.58
	ATOM	475	C	ASP	53	1.709	24.977	40.753	1.00	21.34
	ATOM	476	O	ASP	53	1.213	25.490	41.759	1.00	20.63
15	ATOM	477	N	VAL	54	2.706	24.094	40.803	1.00	20.75
	ATOM	478	H	VAL	54	3.064	23.729	39.964	1.00	0.00
	ATOM	479	CA	VAL	54	3.298	23.650	42.072	1.00	21.10
	ATOM	480	CB	VAL	54	4.081	24.806	42.777	1.00	22.31
	ATOM	481	CG1	VAL	54	4.962	24.261	43.892	1.00	21.47
20	ATOM	482	CG2	VAL	54	4.943	25.546	41.773	1.00	25.32
	ATOM	483	C	VAL	54	2.207	23.094	43.004	1.00	20.23
	ATOM	484	O	VAL	54	2.325	23.144	44.234	1.00	21.96
	ATOM	485	N	ARG	55	1.180	22.502	42.399	1.00	20.64
	ATOM	486	H	ARG	55	1.149	22.431	41.425	1.00	0.00
25	ATOM	487	CA	ARG	55	0.049	21.936	43.127	1.00	20.79
	ATOM	488	CB	ARG	55	-1.166	22.862	42.982	1.00	24.88
	ATOM	489	CG	ARG	55	-2.454	22.303	43.543	1.00	37.51
	ATOM	490	CD	ARG	55	-2.330	22.040	45.036	1.00	47.31
	ATOM	491	NE	ARG	55	-3.385	21.152	45.519	1.00	52.82
30	ATOM	492	HE	ARG	55	-4.305	21.346	45.243	1.00	0.00
	ATOM	493	CZ	ARG	55	-3.179	20.109	46.319	1.00	54.83
	ATOM	494	NH1	ARG	55	-1.950	19.818	46.738	1.00	51.75
	ATOM	495	HH11	ARG	55	-1.181	20.384	46.445	1.00	0.00
	ATOM	496	HH12	ARG	55	-1.803	19.025	47.333	1.00	0.00
35	ATOM	497	NH2	ARG	55	-4.204	19.345	46.686	1.00	55.41
	ATOM	498	HH21	ARG	55	-5.129	19.569	46.367	1.00	0.00
	ATOM	499	HH22	ARG	55	-4.061	18.561	47.291	1.00	0.00
	ATOM	500	C	ARG	55	-0.278	20.539	42.586	1.00	17.44
	ATOM	501	O	ARG	55	-0.162	20.289	41.386	1.00	16.40

	ATOM	502	N	PHE	56	-0.697	19.642	43.472	1.00	12.91
	ATOM	503	H	PHE	56	-0.795	19.904	44.409	1.00	0.00
	ATOM	504	CA	PHE	56	-1.038	18.276	43.087	1.00	11.38
	ATOM	505	CB	PHE	56	-0.670	17.295	44.192	1.00	7.94
5	ATOM	506	CG	PHE	56	0.767	17.346	44.596	1.00	9.45
	ATOM	507	CD1	PHE	56	1.134	17.879	45.828	1.00	9.25
	ATOM	508	CD2	PHE	56	1.756	16.864	43.751	1.00	7.32
	ATOM	509	CE1	PHE	56	2.468	17.931	46.213	1.00	7.59
	ATOM	510	CE2	PHE	56	3.093	16.911	44.126	1.00	10.67
10	ATOM	511	CZ	PHE	56	3.449	17.448	45.362	1.00	7.88
	ATOM	512	C	PHE	56	-2.518	18.128	42.806	1.00	10.74
	ATOM	513	O	PHE	56	-3.354	18.696	43.502	1.00	11.90
	ATOM	514	N	HIS	57	-2.835	17.346	41.786	1.00	12.61
	ATOM	515	H	HIS	57	-2.116	16.929	41.249	1.00	0.00
15	ATOM	516	CA	HIS	57	-4.217	17.082	41.405	1.00	12.51
	ATOM	517	CB	HIS	57	-4.550	17.771	40.076	1.00	15.95
	ATOM	518	CG	HIS	57	-4.415	19.263	40.108	1.00	16.89
	ATOM	519	CD2	HIS	57	-3.346	20.065	39.882	1.00	17.62
	ATOM	520	ND1	HIS	57	-5.466	20.103	40.413	1.00	21.02
20	ATOM	521	HD1	HIS	57	-6.378	19.803	40.644	1.00	0.00
	ATOM	522	CE1	HIS	57	-5.050	21.356	40.374	1.00	18.85
	ATOM	523	NE2	HIS	57	-3.770	21.361	40.056	1.00	17.75
	ATOM	524	HE2	HIS	57	-3.184	22.148	40.028	1.00	0.00
	ATOM	525	C	HIS	57	-4.288	15.567	41.245	1.00	11.47
25	ATOM	526	O	HIS	57	-3.451	14.981	40.553	1.00	9.71
	ATOM	527	N	HIS	58	-5.226	14.932	41.947	1.00	10.52
	ATOM	528	H	HIS	58	-5.837	15.442	42.530	1.00	0.00
	ATOM	529	CA	HIS	58	-5.387	13.478	41.892	1.00	7.58
	ATOM	530	CB	HIS	58	-5.236	12.884	43.293	1.00	4.66
30	ATOM	531	CG	HIS	58	-3.964	13.291	43.973	1.00	4.02
	ATOM	532	CD2	HIS	58	-3.707	14.285	44.855	1.00	2.46
	ATOM	533	ND1	HIS	58	-2.748	12.703	43.697	1.00	3.15
	ATOM	534	HD1	HIS	58	-2.585	11.924	43.109	1.00	0.00
	ATOM	535	CE1	HIS	58	-1.799	13.318	44.372	1.00	2.00
35	ATOM	536	NE2	HIS	58	-2.354	14.281	45.082	1.00	3.60
	ATOM	537	HE2	HIS	58	-1.914	14.927	45.656	1.00	0.00
	ATOM	538	C	HIS	58	-6.734	13.130	41.302	1.00	6.91
	ATOM	539	O	HIS	58	-7.773	13.391	41.905	1.00	10.26
	ATOM	540	N	PHE	59	-6.704	12.588	40.093	1.00	8.54

	ATOM	541	H	PHE	59	-5.843	12.465	39.640	1.00	0.00
	ATOM	542	CA	PHE	59	-7.907	12.202	39.372	1.00	5.78
	ATOM	543	CB	PHE	59	-7.816	12.653	37.915	1.00	7.34
	ATOM	544	CG	PHE	59	-7.752	14.138	37.749	1.00	7.56
5	ATOM	545	CD1	PHE	59	-6.533	14.796	37.774	1.00	8.46
	ATOM	546	CD2	PHE	59	-8.913	14.881	37.588	1.00	6.77
	ATOM	547	CE1	PHE	59	-6.466	16.181	37.646	1.00	10.40
	ATOM	548	CE2	PHE	59	-8.856	16.263	37.461	1.00	9.75
	ATOM	549	CZ	PHE	59	-7.630	16.915	37.492	1.00	11.63
10	ATOM	550	C	PHE	59	-8.126	10.703	39.410	1.00	6.79
	ATOM	551	O	PHE	59	-7.342	9.932	38.852	1.00	7.41
	ATOM	552	N	PRO	60	-9.188	10.263	40.089	1.00	9.70
	ATOM	553	CD	PRO	60	-10.180	11.018	40.877	1.00	6.89
	ATOM	554	CA	PRO	60	-9.444	8.826	40.147	1.00	10.01
15	ATOM	555	CB	PRO	60	-10.483	8.718	41.258	1.00	10.34
	ATOM	556	CG	PRO	60	-11.247	9.988	41.119	1.00	9.58
	ATOM	557	C	PRO	60	-9.983	8.349	38.804	1.00	13.30
	ATOM	558	O	PRO	60	-10.806	9.023	38.174	1.00	14.14
	ATOM	559	N	ILE	61	-9.457	7.226	38.339	1.00	13.16
20	ATOM	560	H	ILE	61	-8.791	6.793	38.870	1.00	0.00
	ATOM	561	CA	ILE	61	-9.857	6.625	37.079	1.00	13.78
	ATOM	562	CB	ILE	61	-8.615	6.239	36.246	1.00	11.71
	ATOM	563	CG2	ILE	61	-9.025	5.656	34.906	1.00	13.24
	ATOM	564	CG1	ILE	61	-7.715	7.460	36.041	1.00	9.66
25	ATOM	565	CD	ILE	61	-6.386	7.129	35.387	1.00	6.22
	ATOM	566	C	ILE	61	-10.651	5.366	37.432	1.00	15.81
	ATOM	567	O	ILE	61	-10.165	4.499	38.167	1.00	14.88
	ATOM	568	N	GLU	62	-11.883	5.286	36.947	1.00	19.32
	ATOM	569	H	GLU	62	-12.238	6.005	36.378	1.00	0.00
30	ATOM	570	CA	GLU	62	-12.723	4.132	37.233	1.00	23.46
	ATOM	571	CB	GLU	62	-14.100	4.575	37.737	1.00	28.96
	ATOM	572	CG	GLU	62	-14.963	3.422	38.253	1.00	36.57
	ATOM	573	CD	GLU	62	-16.337	3.864	38.716	1.00	40.63
	ATOM	574	OE1	GLU	62	-17.320	3.612	37.980	1.00	41.74
35	ATOM	575	OE2	GLU	62	-16.434	4.450	39.819	1.00	41.68
	ATOM	576	C	GLU	62	-12.884	3.230	36.021	1.00	21.41
	ATOM	577	O	GLU	62	-12.984	3.707	34.892	1.00	21.22
	ATOM	578	N	ARG	63	-12.867	1.925	36.262	1.00	21.79
	ATOM	579	H	ARG	63	-12.783	1.600	37.186	1.00	0.00

	ATOM	580	CA	ARG	63	-13.036	0.943	35.205	1.00	25.45
	ATOM	581	CB	ARG	63	-12.425	-0.391	35.615	1.00	27.80
	ATOM	582	CG	ARG	63	-12.414	-1.419	34.496	1.00	33.00
	ATOM	583	CD	ARG	63	-11.931	-2.760	34.997	1.00	33.41
5	ATOM	584	NE	ARG	63	-12.828	-3.269	36.027	1.00	35.94
	ATOM	585	HE	ARG	63	-13.722	-2.876	36.094	1.00	0.00
	ATOM	586	CZ	ARG	63	-12.516	-4.231	36.887	1.00	35.92
	ATOM	587	NH1	ARG	63	-11.318	-4.806	36.851	1.00	37.94
	ATOM	588	HH11	ARG	63	-10.639	-4.529	36.173	1.00	0.00
10	ATOM	589	HH12	ARG	63	-11.100	-5.528	37.509	1.00	0.00
	ATOM	590	NH2	ARG	63	-13.406	-4.610	37.793	1.00	36.87
	ATOM	591	HH21	ARG	63	-14.306	-4.173	37.818	1.00	0.00
	ATOM	592	HH22	ARG	63	-13.189	-5.331	38.450	1.00	0.00
	ATOM	593	C	ARG	63	-14.529	0.767	34.999	1.00	26.74
15	ATOM	594	O	ARG	63	-15.218	0.244	35.872	1.00	29.01
	ATOM	595	N	GLN	64	-15.028	1.218	33.856	1.00	29.10
	ATOM	596	H	GLN	64	-14.402	1.626	33.234	1.00	0.00
	ATOM	597	CA	GLN	64	-16.449	1.125	33.538	1.00	32.01
	ATOM	598	CB	GLN	64	-16.757	1.886	32.247	1.00	31.94
20	ATOM	599	CG	GLN	64	-16.217	3.306	32.192	1.00	35.07
	ATOM	600	CD	GLN	64	-16.893	4.236	33.175	1.00	36.14
	ATOM	601	OE1	GLN	64	-16.698	4.135	34.384	1.00	36.71
	ATOM	602	NE2	GLN	64	-17.681	5.164	32.655	1.00	40.49
	ATOM	603	HE21	GLN	64	-17.785	5.194	31.683	1.00	0.00
25	ATOM	604	HE22	GLN	64	-18.122	5.773	33.280	1.00	0.00
	ATOM	605	C	GLN	64	-16.911	-0.318	33.385	1.00	35.23
	ATOM	606	O	GLN	64	-16.117	-1.214	33.084	1.00	36.40
	ATOM	607	N	LEU	65	-18.215	-0.523	33.551	1.00	39.04
	ATOM	608	H	LEU	65	-18.766	0.242	33.804	1.00	0.00
30	ATOM	609	CA	LEU	65	-18.834	-1.842	33.428	1.00	41.57
	ATOM	610	CB	LEU	65	-20.361	-1.731	33.578	1.00	45.35
	ATOM	611	CG	LEU	65	-21.194	-1.014	32.498	1.00	48.79
	ATOM	612	CD1	LEU	65	-22.682	-1.210	32.774	1.00	48.80
	ATOM	613	CD2	LEU	65	-20.861	0.477	32.425	1.00	48.69
35	ATOM	614	C	LEU	65	-18.490	-2.498	32.089	1.00	40.88
	ATOM	615	O	LEU	65	-18.406	-3.720	31.988	1.00	41.06
	ATOM	616	N	ASN	66	-18.281	-1.670	31.070	1.00	40.78
	ATOM	617	H	ASN	66	-18.363	-0.709	31.237	1.00	0.00
	ATOM	618	CA	ASN	66	-17.946	-2.155	29.735	1.00	39.66

	ATOM	619	CB	ASN	66	-18.496	-1.214	28.649	1.00	43.14
	ATOM	620	CG	ASN	66	-18.333	0.255	28.995	1.00	46.18
	ATOM	621	OD1	ASN	66	-18.884	0.742	29.987	1.00	48.62
	ATOM	622	ND2	ASN	66	-17.605	0.977	28.161	1.00	45.77
5	ATOM	623	HD21	ASN	66	-17.199	0.536	27.388	1.00	0.00
	ATOM	624	HD22	ASN	66	-17.532	1.927	28.370	1.00	0.00
	ATOM	625	C	ASN	66	-16.464	-2.440	29.505	1.00	36.70
	ATOM	626	O	ASN	66	-16.045	-2.686	28.375	1.00	35.57
	ATOM	627	N	GLY	67	-15.676	-2.408	30.577	1.00	35.06
10	ATOM	628	H	GLY	67	-16.031	-2.213	31.465	1.00	0.00
	ATOM	629	CA	GLY	67	-14.253	-2.686	30.467	1.00	32.41
	ATOM	630	C	GLY	67	-13.349	-1.520	30.106	1.00	30.31
	ATOM	631	O	GLY	67	-12.138	-1.697	29.991	1.00	30.24
	ATOM	632	N	THR	68	-13.923	-0.338	29.904	1.00	28.66
15	ATOM	633	H	THR	68	-14.888	-0.234	29.971	1.00	0.00
	ATOM	634	CA	THR	68	-13.128	0.838	29.574	1.00	25.46
	ATOM	635	CB	THR	68	-13.872	1.785	28.620	1.00	26.78
	ATOM	636	OG1	THR	68	-15.186	2.052	29.127	1.00	27.70
	ATOM	637	HG1	THR	68	-15.620	2.606	28.472	1.00	0.00
20	ATOM	638	CG2	THR	68	-13.957	1.180	27.230	1.00	27.47
	ATOM	639	C	THR	68	-12.746	1.596	30.838	1.00	23.00
	ATOM	640	O	THR	68	-13.144	1.220	31.938	1.00	22.61
	ATOM	641	N	TYR	69	-11.995	2.678	30.673	1.00	20.59
	ATOM	642	H	TYR	69	-11.718	2.938	29.778	1.00	0.00
25	ATOM	643	CA	TYR	69	-11.551	3.483	31.796	1.00	15.58
	ATOM	644	CB	TYR	69	-10.047	3.328	31.978	1.00	12.63
	ATOM	645	CG	TYR	69	-9.664	1.936	32.386	1.00	12.79
	ATOM	646	CD1	TYR	69	-9.485	0.934	31.433	1.00	10.68
	ATOM	647	CE1	TYR	69	-9.189	-0.370	31.815	1.00	13.20
30	ATOM	648	CD2	TYR	69	-9.533	1.601	33.731	1.00	9.78
	ATOM	649	CE2	TYR	69	-9.236	0.308	34.119	1.00	11.49
	ATOM	650	CZ	TYR	69	-9.067	-0.674	33.161	1.00	11.48
	ATOM	651	OH	TYR	69	-8.785	-1.961	33.546	1.00	13.55
	ATOM	652	HH	TYR	69	-8.850	-2.067	34.504	1.00	0.00
35	ATOM	653	C	TYR	69	-11.897	4.936	31.583	1.00	15.95
	ATOM	654	O	TYR	69	-11.727	5.468	30.487	1.00	13.25
	ATOM	655	N	ALA	70	-12.361	5.591	32.638	1.00	17.69
	ATOM	656	H	ALA	70	-12.479	5.142	33.508	1.00	0.00
	ATOM	657	CA	ALA	70	-12.725	6.991	32.533	1.00	19.16

	ATOM	658	CB	ALA	70	-14.150	7.121	31.981	1.00	18.87
	ATOM	659	C	ALA	70	-12.608	7.742	33.848	1.00	18.59
	ATOM	660	O	ALA	70	-12.844	7.184	34.925	1.00	19.11
	ATOM	661	N	ILE	71	-12.155	8.985	33.749	1.00	19.47
5	ATOM	662	H	ILE	71	-11.906	9.337	32.870	1.00	0.00
	ATOM	663	CA	ILE	71	-12.048	9.864	34.897	1.00	19.95
	ATOM	664	CB	ILE	71	-11.037	10.989	34.645	1.00	21.71
	ATOM	665	CG2	ILE	71	-11.010	11.948	35.814	1.00	20.85
	ATOM	666	CG1	ILE	71	-9.644	10.405	34.428	1.00	21.25
10	ATOM	667	CD	ILE	71	-8.597	11.453	34.109	1.00	23.55
	ATOM	668	C	ILE	71	-13.448	10.455	34.936	1.00	21.14
	ATOM	669	O	ILE	71	-14.049	10.673	33.888	1.00	19.95
	ATOM	670	N	ALA	72	-13.991	10.669	36.126	1.00	25.60
	ATOM	671	H	ALA	72	-13.484	10.472	36.937	1.00	0.00
15	ATOM	672	CA	ALA	72	-15.335	11.220	36.240	1.00	30.18
	ATOM	673	CB	ALA	72	-15.679	11.495	37.698	1.00	31.23
	ATOM	674	C	ALA	72	-15.458	12.494	35.412	1.00	33.10
	ATOM	675	O	ALA	72	-14.651	13.418	35.551	1.00	34.99
	ATOM	676	N	GLY	73	-16.425	12.502	34.500	1.00	33.63
20	ATOM	677	H	GLY	73	-16.972	11.706	34.360	1.00	0.00
	ATOM	678	CA	GLY	73	-16.643	13.663	33.658	1.00	34.45
	ATOM	679	C	GLY	73	-15.998	13.530	32.293	1.00	34.98
	ATOM	680	O	GLY	73	-16.470	14.113	31.317	1.00	36.54
	ATOM	681	N	GLY	74	-14.931	12.743	32.221	1.00	34.48
25	ATOM	682	H	GLY	74	-14.615	12.263	33.010	1.00	0.00
	ATOM	683	CA	GLY	74	-14.230	12.558	30.966	1.00	32.55
	ATOM	684	C	GLY	74	-14.704	11.388	30.130	1.00	32.17
	ATOM	685	O	GLY	74	-15.632	10.666	30.493	1.00	32.72
	ATOM	686	N	LYS	75	-14.040	11.200	28.997	1.00	31.90
30	ATOM	687	H	LYS	75	-13.309	11.813	28.811	1.00	0.00
	ATOM	688	CA	LYS	75	-14.361	10.125	28.075	1.00	30.83
	ATOM	689	CB	LYS	75	-14.002	10.536	26.645	1.00	34.04
	ATOM	690	CG	LYS	75	-12.604	11.124	26.486	1.00	37.94
	ATOM	691	CD	LYS	75	-12.207	11.203	25.022	1.00	40.86
35	ATOM	692	CE	LYS	75	-12.088	9.811	24.408	1.00	44.39
	ATOM	693	NZ	LYS	75	-11.678	9.850	22.977	1.00	46.69
	ATOM	694	HZ1	LYS	75	-10.759	10.330	22.888	1.00	0.00
	ATOM	695	HZ2	LYS	75	-12.394	10.355	22.419	1.00	0.00
	ATOM	696	HZ3	LYS	75	-11.601	8.873	22.628	1.00	0.00

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	ATOM	697	C	LYS	75	-13.652	8.825	28.443	1.00	29.70
	ATOM	698	O	LYS	75	-12.567	8.840	29.035	1.00	29.72
	ATOM	699	N	ALA	76	-14.264	7.705	28.072	1.00	26.68
	ATOM	700	H	ALA	76	-15.096	7.775	27.566	1.00	0.00
5	ATOM	701	CA	ALA	76	-13.711	6.388	28.352	1.00	26.38
	ATOM	702	CB	ALA	76	-14.813	5.334	28.327	1.00	26.29
	ATOM	703	C	ALA	76	-12.621	6.028	27.355	1.00	23.85
	ATOM	704	O	ALA	76	-12.590	6.542	26.241	1.00	23.96
	ATOM	705	N	HIS	77	-11.718	5.149	27.769	1.00	23.92
10	ATOM	706	H	HIS	77	-11.794	4.779	28.678	1.00	0.00
	ATOM	707	CA	HIS	77	-10.624	4.715	26.915	1.00	23.21
	ATOM	708	CB	HIS	77	-9.349	5.468	27.270	1.00	22.18
	ATOM	709	CG	HIS	77	-9.466	6.947	27.097	1.00	22.49
	ATOM	710	CD2	HIS	77	-9.273	7.732	26.012	1.00	23.47
15	ATOM	711	ND1	HIS	77	-9.870	7.784	28.111	1.00	25.61
	ATOM	712	HD1	HIS	77	-10.123	7.524	29.028	1.00	0.00
	ATOM	713	CE1	HIS	77	-9.920	9.025	27.662	1.00	25.59
	ATOM	714	NE2	HIS	77	-9.563	9.020	26.390	1.00	24.65
	ATOM	715	HE2	HIS	77	-9.544	9.793	25.792	1.00	0.00
20	ATOM	716	C	HIS	77	-10.413	3.227	27.073	1.00	23.54
	ATOM	717	O	HIS	77	-10.833	2.640	28.067	1.00	22.48
	ATOM	718	N	CYS	78	-9.762	2.622	26.086	1.00	24.06
	ATOM	719	H	CYS	78	-9.468	3.146	25.315	1.00	0.00
	ATOM	720	CA	CYS	78	-9.500	1.186	26.089	1.00	25.49
25	ATOM	721	CB	CYS	78	-8.831	0.762	24.782	1.00	28.48
	ATOM	722	SG	CYS	78	-9.718	1.274	23.311	1.00	45.92
	ATOM	723	C	CYS	78	-8.625	0.743	27.245	1.00	20.86
	ATOM	724	O	CYS	78	-8.675	-0.413	27.649	1.00	21.75
	ATOM	725	N	GLY	79	-7.791	1.646	27.740	1.00	17.20
30	ATOM	726	H	GLY	79	-7.750	2.555	27.393	1.00	0.00
	ATOM	727	CA	GLY	79	-6.919	1.297	28.839	1.00	13.97
	ATOM	728	C	GLY	79	-6.204	2.501	29.408	1.00	13.22
	ATOM	729	O	GLY	79	-6.291	3.600	28.848	1.00	12.24
	ATOM	730	N	PRO	80	-5.473	2.314	30.518	1.00	14.67
35	ATOM	731	CD	PRO	80	-5.345	1.022	31.222	1.00	16.84
	ATOM	732	CA	PRO	80	-4.714	3.358	31.207	1.00	15.78
	ATOM	733	CB	PRO	80	-4.108	2.610	32.402	1.00	17.64
	ATOM	734	CG	PRO	80	-4.039	1.179	31.930	1.00	17.90
	ATOM	735	C	PRO	80	-3.645	3.991	30.321	1.00	14.91

	ATOM	736	O	PRO	80	-3.434	5.206	30.357	1.00	15.49
	ATOM	737	N	ALA	81	-3.003	3.168	29.500	1.00	13.13
	ATOM	738	H	ALA	81	-3.231	2.212	29.488	1.00	0.00
	ATOM	739	CA	ALA	81	-1.969	3.645	28.594	1.00	13.20
5	ATOM	740	CB	ALA	81	-1.325	2.474	27.882	1.00	11.11
	ATOM	741	C	ALA	81	-2.585	4.602	27.584	1.00	12.98
	ATOM	742	O	ALA	81	-2.080	5.706	27.376	1.00	9.81
	ATOM	743	N	GLU	82	-3.712	4.185	27.006	1.00	15.40
	ATOM	744	H	GLU	82	-4.074	3.319	27.268	1.00	0.00
10	ATOM	745	CA	GLU	82	-4.432	4.975	26.007	1.00	16.50
	ATOM	746	CB	GLU	82	-5.578	4.165	25.391	1.00	18.83
	ATOM	747	CG	GLU	82	-5.143	3.076	24.417	1.00	22.18
	ATOM	748	CD	GLU	82	-4.391	1.934	25.087	1.00	29.04
	ATOM	749	OE1	GLU	82	-4.960	1.286	25.992	1.00	29.04
15	ATOM	750	OE2	GLU	82	-3.228	1.678	24.702	1.00	36.49
	ATOM	751	C	GLU	82	-4.974	6.266	26.594	1.00	16.45
	ATOM	752	O	GLU	82	-5.064	7.287	25.905	1.00	15.38
	ATOM	753	N	LEU	83	-5.338	6.215	27.868	1.00	15.01
	ATOM	754	H	LEU	83	-5.252	5.365	28.350	1.00	0.00
20	ATOM	755	CA	LEU	83	-5.863	7.378	28.567	1.00	13.23
	ATOM	756	CB	LEU	83	-6.453	6.957	29.920	1.00	11.92
	ATOM	757	CG	LEU	83	-7.191	8.010	30.748	1.00	9.05
	ATOM	758	CD1	LEU	83	-8.321	7.365	31.526	1.00	6.47
	ATOM	759	CD2	LEU	83	-6.217	8.729	31.669	1.00	8.09
25	ATOM	760	C	LEU	83	-4.770	8.431	28.743	1.00	12.70
	ATOM	761	O	LEU	83	-4.964	9.603	28.415	1.00	13.58
	ATOM	762	N	CYS	84	-3.608	8.013	29.228	1.00	12.46
	ATOM	763	H	CYS	84	-3.484	7.068	29.473	1.00	0.00
	ATOM	764	CA	CYS	84	-2.508	8.948	29.419	1.00	11.61
30	ATOM	765	CB	CYS	84	-1.387	8.289	30.207	1.00	10.43
	ATOM	766	SG	CYS	84	-1.915	7.860	31.867	1.00	10.33
	ATOM	767	C	CYS	84	-1.997	9.485	28.092	1.00	13.49
	ATOM	768	O	CYS	84	-1.591	10.640	28.003	1.00	12.47
	ATOM	769	N	GLU	85	-2.024	8.640	27.064	1.00	16.19
35	ATOM	770	H	GLU	85	-2.346	7.726	27.199	1.00	0.00
	ATOM	771	CA	GLU	85	-1.590	9.035	25.729	1.00	18.26
	ATOM	772	CB	GLU	85	-1.542	7.812	24.802	1.00	19.98
	ATOM	773	CG	GLU	85	-0.393	6.843	25.144	1.00	26.96
	ATOM	774	CD	GLU	85	-0.462	5.465	24.456	1.00	28.02

	ATOM	775	OE1	GLU	85	0.570	4.759	24.466	1.00	25.08
	ATOM	776	OE2	GLU	85	-1.530	5.069	23.937	1.00	27.13
	ATOM	777	C	GLU	85	-2.537	10.113	25.192	1.00	19.29
	ATOM	778	O	GLU	85	-2.099	11.077	24.564	1.00	22.26
5	ATOM	779	N	PHE	86	-3.824	9.985	25.508	1.00	18.82
	ATOM	780	H	PHE	86	-4.103	9.216	26.042	1.00	0.00
	ATOM	781	CA	PHE	86	-4.839	10.948	25.080	1.00	15.74
	ATOM	782	CB	PHE	86	-6.240	10.391	25.368	1.00	14.90
	ATOM	783	CG	PHE	86	-7.350	11.360	25.084	1.00	17.05
10	ATOM	784	CD1	PHE	86	-7.867	11.487	23.801	1.00	20.88
	ATOM	785	CD2	PHE	86	-7.867	12.167	26.096	1.00	17.90
	ATOM	786	CE1	PHE	86	-8.883	12.407	23.529	1.00	21.36
	ATOM	787	CE2	PHE	86	-8.878	13.089	25.834	1.00	16.83
	ATOM	788	CZ	PHE	86	-9.387	13.209	24.551	1.00	20.44
15	ATOM	789	C	PHE	86	-4.674	12.313	25.762	1.00	15.39
	ATOM	790	O	PHE	86	-4.705	13.355	25.104	1.00	9.31
	ATOM	791	N	TYR	87	-4.511	12.302	27.082	1.00	14.05
	ATOM	792	H	TYR	87	-4.518	11.448	27.562	1.00	0.00
	ATOM	793	CA	TYR	87	-4.357	13.542	27.838	1.00	16.04
20	ATOM	794	CB	TYR	87	-4.645	13.303	29.316	1.00	15.23
	ATOM	795	CG	TYR	87	-6.106	13.035	29.553	1.00	17.80
	ATOM	796	CD1	TYR	87	-6.551	11.781	29.964	1.00	20.66
	ATOM	797	CE1	TYR	87	-7.911	11.519	30.142	1.00	21.74
	ATOM	798	CD2	TYR	87	-7.056	14.028	29.327	1.00	19.58
25	ATOM	799	CE2	TYR	87	-8.411	13.780	29.500	1.00	19.90
	ATOM	800	CZ	TYR	87	-8.834	12.526	29.907	1.00	22.31
	ATOM	801	OH	TYR	87	-10.179	12.284	30.070	1.00	24.09
	ATOM	802	HH	TYR	87	-10.601	13.151	29.992	1.00	0.00
	ATOM	803	C	TYR	87	-3.042	14.282	27.629	1.00	15.72
30	ATOM	804	O	TYR	87	-2.918	15.457	27.988	1.00	13.60
	ATOM	805	N	SER	88	-2.059	13.598	27.054	1.00	17.80
	ATOM	806	H	SER	88	-2.164	12.641	26.866	1.00	0.00
	ATOM	807	CA	SER	88	-0.775	14.222	26.763	1.00	23.25
	ATOM	808	CB	SER	88	0.258	13.165	26.371	1.00	23.49
35	ATOM	809	OG	SER	88	0.617	12.360	27.480	1.00	33.23
	ATOM	810	HG	SER	88	0.973	12.975	28.143	1.00	0.00
	ATOM	811	C	SER	88	-0.938	15.226	25.619	1.00	26.20
	ATOM	812	O	SER	88	-0.278	16.265	25.595	1.00	28.26
	ATOM	813	N	ARG	89	-1.822	14.908	24.677	1.00	30.06

	ATOM	814	H	ARG	89	-2.342	14.080	24.761	1.00	0.00
	ATOM	815	CA	ARG	89	-2.070	15.771	23.524	1.00	33.80
	ATOM	816	CB	ARG	89	-2.350	14.931	22.269	1.00	37.17
	ATOM	817	CG	ARG	89	-1.112	14.334	21.598	1.00	43.59
5	ATOM	818	CD	ARG	89	-0.425	13.287	22.464	1.00	47.19
	ATOM	819	NE	ARG	89	0.796	12.767	21.848	1.00	51.34
	ATOM	820	HE	ARG	89	0.710	12.040	21.193	1.00	0.00
	ATOM	821	CZ	ARG	89	2.023	13.219	22.103	1.00	53.00
	ATOM	822	NH1	ARG	89	2.212	14.212	22.967	1.00	53.42
10	ATOM	823	HH11	ARG	89	1.435	14.633	23.434	1.00	0.00
	ATOM	824	HH12	ARG	89	3.142	14.533	23.154	1.00	0.00
	ATOM	825	NH2	ARG	89	3.070	12.664	21.503	1.00	54.73
	ATOM	826	HH21	ARG	89	2.936	11.899	20.870	1.00	0.00
	ATOM	827	HH22	ARG	89	3.993	13.004	21.690	1.00	0.00
15	ATOM	828	C	ARG	89	-3.224	16.747	23.742	1.00	33.93
	ATOM	829	O	ARG	89	-3.220	17.849	23.195	1.00	35.37
	ATOM	830	N	ASP	90	-4.206	16.342	24.539	1.00	34.09
	ATOM	831	H	ASP	90	-4.177	15.460	24.968	1.00	0.00
	ATOM	832	CA	ASP	90	-5.370	17.181	24.797	1.00	32.55
20	ATOM	833	CB	ASP	90	-6.533	16.707	23.907	1.00	34.44
	ATOM	834	CG	ASP	90	-7.780	17.576	24.028	1.00	37.74
	ATOM	835	OD1	ASP	90	-8.865	17.075	23.662	1.00	42.07
	ATOM	836	OD2	ASP	90	-7.688	18.749	24.464	1.00	36.32
	ATOM	837	C	ASP	90	-5.775	17.137	26.271	1.00	31.21
25	ATOM	838	O	ASP	90	-6.160	16.086	26.784	1.00	29.06
	ATOM	839	N	PRO	91	-5.678	18.280	26.974	1.00	31.00
	ATOM	840	CD	PRO	91	-5.144	19.571	26.500	1.00	31.27
	ATOM	841	CA	PRO	91	-6.046	18.363	28.391	1.00	30.53
	ATOM	842	CB	PRO	91	-5.938	19.860	28.677	1.00	30.79
30	ATOM	843	CG	PRO	91	-4.817	20.280	27.793	1.00	30.18
	ATOM	844	C	PRO	91	-7.479	17.869	28.576	1.00	30.82
	ATOM	845	O	PRO	91	-7.783	17.169	29.536	1.00	32.23
	ATOM	846	N	ASP	92	-8.358	18.287	27.664	1.00	31.25
	ATOM	847	H	ASP	92	-8.041	18.890	26.966	1.00	0.00
35	ATOM	848	CA	ASP	92	-9.768	17.895	27.660	1.00	29.68
	ATOM	849	CB	ASP	92	-9.906	16.470	27.097	1.00	32.25
	ATOM	850	CG	ASP	92	-11.281	16.192	26.498	1.00	33.34
	ATOM	851	OD1	ASP	92	-11.880	15.142	26.826	1.00	33.77
	ATOM	852	OD2	ASP	92	-11.748	17.009	25.679	1.00	39.38

	ATOM	853	C	ASP	92	-10.423	18.005	29.043	1.00	30.56
	ATOM	854	O	ASP	92	-11.208	17.142	29.442	1.00	30.28
	ATOM	855	N	GLY	93	-10.099	19.079	29.762	1.00	29.01
	ATOM	856	H	GLY	93	-9.464	19.737	29.417	1.00	0.00
5	ATOM	857	CA	GLY	93	-10.665	19.285	31.084	1.00	27.68
	ATOM	858	C	GLY	93	-9.654	19.345	32.218	1.00	27.53
	ATOM	859	O	GLY	93	-9.933	19.912	33.278	1.00	28.17
	ATOM	860	N	LEU	94	-8.488	18.737	32.020	1.00	25.94
	ATOM	861	H	LEU	94	-8.329	18.255	31.183	1.00	0.00
10	ATOM	862	CA	LEU	94	-7.451	18.741	33.046	1.00	26.33
	ATOM	863	CB	LEU	94	-6.353	17.725	32.710	1.00	22.36
	ATOM	864	CG	LEU	94	-6.696	16.241	32.594	1.00	22.65
	ATOM	865	CD1	LEU	94	-5.403	15.473	32.399	1.00	20.32
	ATOM	866	CD2	LEU	94	-7.429	15.742	33.829	1.00	21.91
15	ATOM	867	C	LEU	94	-6.830	20.133	33.167	1.00	27.78
	ATOM	868	O	LEU	94	-6.927	20.942	32.239	1.00	27.47
	ATOM	869	N	PRO	95	-6.175	20.423	34.310	1.00	26.98
	ATOM	870	CD	PRO	95	-6.077	19.560	35.502	1.00	26.89
	ATOM	871	CA	PRO	95	-5.526	21.715	34.558	1.00	26.62
20	ATOM	872	CB	PRO	95	-4.898	21.518	35.939	1.00	24.83
	ATOM	873	CG	PRO	95	-5.821	20.556	36.598	1.00	24.86
	ATOM	874	C	PRO	95	-4.456	22.009	33.504	1.00	27.96
	ATOM	875	O	PRO	95	-4.073	23.163	33.301	1.00	29.86
	ATOM	876	N	CYS	96	-3.924	20.944	32.909	1.00	27.78
25	ATOM	877	H	CYS	96	-4.197	20.035	33.153	1.00	0.00
	ATOM	878	CA	CYS	96	-2.911	21.022	31.859	1.00	26.63
	ATOM	879	CB	CYS	96	-1.580	21.563	32.394	1.00	29.10
	ATOM	880	SG	CYS	96	-0.785	20.559	33.655	1.00	33.00
	ATOM	881	C	CYS	96	-2.715	19.626	31.285	1.00	25.83
30	ATOM	882	O	CYS	96	-3.114	18.633	31.897	1.00	25.07
	ATOM	883	N	ASN	97	-2.145	19.547	30.092	1.00	24.09
	ATOM	884	H	ASN	97	-1.833	20.360	29.642	1.00	0.00
	ATOM	885	CA	ASN	97	-1.919	18.259	29.464	1.00	24.47
	ATOM	886	CB	ASN	97	-1.613	18.432	27.978	1.00	27.75
35	ATOM	887	CG	ASN	97	-0.384	19.271	27.734	1.00	30.72
	ATOM	888	OD1	ASN	97	-0.267	20.381	28.255	1.00	33.88
	ATOM	889	ND2	ASN	97	0.540	18.754	26.936	1.00	32.61
	ATOM	890	HD21	ASN	97	0.370	17.869	26.542	1.00	0.00
	ATOM	891	HD22	ASN	97	1.350	19.270	26.774	1.00	0.00

	ATOM	892	C	ASN	97	-0.779	17.526	30.154	1.00	22.90
	ATOM	893	O	ASN	97	0.056	18.140	30.820	1.00	21.51
	ATOM	894	N	LEU	98	-0.756	16.207	29.990	1.00	20.54
	ATOM	895	H	LEU	98	-1.447	15.800	29.429	1.00	0.00
5	ATOM	896	CA	LEU	98	0.273	15.369	30.591	1.00	19.00
	ATOM	897	CB	LEU	98	-0.201	13.913	30.641	1.00	14.90
	ATOM	898	CG	LEU	98	-1.503	13.668	31.417	1.00	11.64
	ATOM	899	CD1	LEU	98	-1.847	12.182	31.440	1.00	6.04
	ATOM	900	CD2	LEU	98	-1.368	14.215	32.828	1.00	9.37
10	ATOM	901	C	LEU	98	1.568	15.498	29.790	1.00	20.67
	ATOM	902	O	LEU	98	1.685	14.970	28.683	1.00	22.82
	ATOM	903	N	ARG	99	2.545	16.180	30.372	1.00	20.51
	ATOM	904	H	ARG	99	2.399	16.534	31.271	1.00	0.00
	ATOM	905	CA	ARG	99	3.815	16.425	29.712	1.00	21.55
15	ATOM	906	CB	ARG	99	4.261	17.864	29.974	1.00	19.71
	ATOM	907	CG	ARG	99	3.230	18.899	29.558	1.00	22.45
	ATOM	908	CD	ARG	99	3.620	20.296	29.990	1.00	25.64
	ATOM	909	NE	ARG	99	2.530	21.243	29.758	1.00	31.98
	ATOM	910	HE	ARG	99	1.868	21.026	29.067	1.00	0.00
20	ATOM	911	CZ	ARG	99	2.366	22.383	30.426	1.00	35.95
	ATOM	912	NH1	ARG	99	3.224	22.733	31.380	1.00	38.13
	ATOM	913	HH11	ARG	99	4.000	22.139	31.586	1.00	0.00
	ATOM	914	HH12	ARG	99	3.111	23.583	31.889	1.00	0.00
	ATOM	915	NH2	ARG	99	1.342	23.177	30.139	1.00	35.02
25	ATOM	916	HH21	ARG	99	0.700	22.940	29.416	1.00	0.00
	ATOM	917	HH22	ARG	99	1.238	24.034	30.643	1.00	0.00
	ATOM	918	C	ARG	99	4.961	15.471	30.022	1.00	23.55
	ATOM	919	O	ARG	99	5.461	14.789	29.125	1.00	28.87
	ATOM	920	N	LYS	100	5.377	15.408	31.281	1.00	21.07
30	ATOM	921	H	LYS	100	4.912	15.896	31.993	1.00	0.00
	ATOM	922	CA	LYS	100	6.507	14.564	31.644	1.00	18.54
	ATOM	923	CB	LYS	100	7.575	15.441	32.304	1.00	20.05
	ATOM	924	CG	LYS	100	8.939	14.799	32.507	1.00	27.37
	ATOM	925	CD	LYS	100	9.891	15.784	33.196	1.00	29.35
35	ATOM	926	CE	LYS	100	11.321	15.259	33.266	1.00	32.53
	ATOM	927	NZ	LYS	100	11.443	13.994	34.043	1.00	36.81
	ATOM	928	HZ1	LYS	100	10.853	13.266	33.597	1.00	0.00
	ATOM	929	HZ2	LYS	100	11.123	14.155	35.017	1.00	0.00
	ATOM	930	HZ3	LYS	100	12.438	13.683	34.047	1.00	0.00

	ATOM	931	C	LYS	100	6.118	13.410	32.563	1.00	17.15
	ATOM	932	O	LYS	100	5.586	13.627	33.647	1.00	16.18
	ATOM	933	N	PRO	101	6.302	12.162	32.104	1.00	16.34
	ATOM	934	CD	PRO	101	6.627	11.735	30.734	1.00	15.63
5	ATOM	935	CA	PRO	101	5.961	11.006	32.937	1.00	16.36
	ATOM	936	CB	PRO	101	6.092	9.830	31.965	1.00	16.00
	ATOM	937	CG	PRO	101	5.849	10.453	30.620	1.00	17.99
	ATOM	938	C	PRO	101	6.987	10.883	34.064	1.00	15.83
	ATOM	939	O	PRO	101	8.194	10.987	33.832	1.00	14.18
10	ATOM	940	N	CYS	102	6.510	10.718	35.287	1.00	14.78
	ATOM	941	H	CYS	102	5.550	10.658	35.443	1.00	0.00
	ATOM	942	CA	CYS	102	7.410	10.576	36.415	1.00	12.30
	ATOM	943	CB	CYS	102	6.762	11.078	37.700	1.00	8.52
	ATOM	944	SG	CYS	102	7.925	11.184	39.064	1.00	12.86
15	ATOM	945	C	CYS	102	7.714	9.097	36.511	1.00	13.33
	ATOM	946	O	CYS	102	7.078	8.364	37.266	1.00	13.67
	ATOM	947	N	ASN	103	8.662	8.661	35.693	1.00	13.67
	ATOM	948	H	ASN	103	9.085	9.330	35.108	1.00	0.00
	ATOM	949	CA	ASN	103	9.073	7.264	35.632	1.00	14.10
20	ATOM	950	CB	ASN	103	10.013	7.041	34.444	1.00	15.80
	ATOM	951	CG	ASN	103	9.374	7.399	33.124	1.00	18.98
	ATOM	952	OD1	ASN	103	8.206	7.101	32.888	1.00	19.82
	ATOM	953	ND2	ASN	103	10.132	8.056	32.259	1.00	24.80
	ATOM	954	HD21	ASN	103	11.054	8.272	32.491	1.00	0.00
25	ATOM	955	HD22	ASN	103	9.730	8.327	31.394	1.00	0.00
	ATOM	956	C	ASN	103	9.741	6.767	36.899	1.00	13.80
	ATOM	957	O	ASN	103	10.513	7.483	37.537	1.00	14.29
	ATOM	958	N	ARG	104	9.448	5.522	37.247	1.00	13.40
	ATOM	959	H	ARG	104	8.826	5.010	36.697	1.00	0.00
30	ATOM	960	CA	ARG	104	10.018	4.896	38.426	1.00	14.48
	ATOM	961	CB	ARG	104	9.501	3.464	38.556	1.00	14.01
	ATOM	962	CG	ARG	104	8.089	3.354	39.074	1.00	11.01
	ATOM	963	CD	ARG	104	7.691	1.901	39.222	1.00	13.56
	ATOM	964	NE	ARG	104	7.262	1.324	37.951	1.00	18.89
35	ATOM	965	HE	ARG	104	6.380	1.537	37.599	1.00	0.00
	ATOM	966	CZ	ARG	104	8.001	0.529	37.190	1.00	16.72
	ATOM	967	NH1	ARG	104	9.227	0.203	37.557	1.00	24.48
	ATOM	968	HH11	ARG	104	9.608	0.548	38.418	1.00	0.00
	ATOM	969	HH12	ARG	104	9.771	-0.406	36.979	1.00	0.00

	ATOM	970	NH2	ARG	104	7.501	0.044	36.065	1.00	24.27
	ATOM	971	HH21	ARG	104	6.570	0.279	35.777	1.00	0.00
	ATOM	972	HH22	ARG	104	8.060	-0.560	35.497	1.00	0.00
	ATOM	973	C	ARG	104	11.545	4.871	38.363	1.00	17.95
5	ATOM	974	O	ARG	104	12.128	4.542	37.326	1.00	16.59
	ATOM	975	N	PRO	105	12.211	5.235	39.473	1.00	21.58
	ATOM	976	CD	PRO	105	11.622	5.709	40.738	1.00	24.11
	ATOM	977	CA	PRO	105	13.674	5.248	39.548	1.00	24.61
	ATOM	978	CB	PRO	105	13.933	5.750	40.970	1.00	25.94
10	ATOM	979	CG	PRO	105	12.713	6.566	41.285	1.00	26.77
	ATOM	980	C	PRO	105	14.174	3.816	39.403	1.00	26.84
	ATOM	981	O	PRO	105	13.493	2.884	39.829	1.00	29.03
	ATOM	982	N	SER	106	15.348	3.629	38.805	1.00	29.28
	ATOM	983	H	SER	106	15.851	4.400	38.484	1.00	0.00
15	ATOM	984	CA	SER	106	15.893	2.283	38.652	1.00	31.72
	ATOM	985	CB	SER	106	17.306	2.329	38.074	1.00	34.84
	ATOM	986	OG	SER	106	17.273	2.524	36.673	1.00	42.09
	ATOM	987	HG	SER	106	16.759	3.302	36.439	1.00	0.00
	ATOM	988	C	SER	106	15.904	1.572	40.002	1.00	31.31
20	ATOM	989	O	SER	106	16.301	2.154	41.017	1.00	32.32
	ATOM	990	N	GLY	107	15.433	0.330	40.015	1.00	27.87
	ATOM	991	H	GLY	107	15.089	-0.065	39.190	1.00	0.00
	ATOM	992	CA	GLY	107	15.391	-0.420	41.252	1.00	27.05
	ATOM	993	C	GLY	107	14.041	-0.345	41.941	1.00	26.16
25	ATOM	994	O	GLY	107	13.837	-0.989	42.971	1.00	26.25
	ATOM	995	N	LEU	108	13.130	0.462	41.406	1.00	25.02
	ATOM	996	H	LEU	108	13.318	1.005	40.610	1.00	0.00
	ATOM	997	CA	LEU	108	11.800	0.577	41.986	1.00	22.01
	ATOM	998	CB	LEU	108	11.375	2.044	42.127	1.00	20.37
30	ATOM	999	CG	LEU	108	10.061	2.277	42.885	1.00	19.84
	ATOM	1000	CD1	LEU	108	10.151	1.672	44.270	1.00	20.62
	ATOM	1001	CD2	LEU	108	9.749	3.758	42.985	1.00	19.42
	ATOM	1002	C	LEU	108	10.831	-0.173	41.087	1.00	22.30
	ATOM	1003	O	LEU	108	10.848	-0.020	39.865	1.00	22.42
35	ATOM	1004	N	GLU	109	10.022	-1.027	41.699	1.00	23.39
	ATOM	1005	H	GLU	109	10.052	-1.102	42.673	1.00	0.00
	ATOM	1006	CA	GLU	109	9.041	-1.824	40.975	1.00	21.29
	ATOM	1007	CB	GLU	109	9.231	-3.310	41.306	1.00	28.00
	ATOM	1008	CG	GLU	109	10.625	-3.868	40.997	1.00	34.55

	ATOM	1009	CD	GLU	109	11.018	-3.719	39.536	1.00	39.08
	ATOM	1010	OE1	GLU	109	11.970	-2.955	39.253	1.00	41.37
	ATOM	1011	OE2	GLU	109	10.378	-4.363	38.672	1.00	40.88
	ATOM	1012	C	GLU	109	7.655	-1.385	41.414	1.00	17.67
5	ATOM	1013	O	GLU	109	7.516	-0.686	42.420	1.00	17.75
	ATOM	1014	N	PRO	110	6.619	-1.718	40.628	1.00	13.39
	ATOM	1015	CD	PRO	110	6.595	-2.348	39.301	1.00	8.68
	ATOM	1016	CA	PRO	110	5.274	-1.316	41.038	1.00	11.28
	ATOM	1017	CB	PRO	110	4.405	-1.856	39.912	1.00	9.37
10	ATOM	1018	CG	PRO	110	5.315	-1.825	38.737	1.00	9.71
	ATOM	1019	C	PRO	110	4.988	-2.029	42.357	1.00	13.59
	ATOM	1020	O	PRO	110	5.280	-3.213	42.503	1.00	15.70
	ATOM	1021	N	GLN	111	4.451	-1.293	43.320	1.00	14.83
	ATOM	1022	H	GLN	111	4.224	-0.362	43.128	1.00	0.00
15	ATOM	1023	CA	GLN	111	4.146	-1.817	44.644	1.00	14.80
	ATOM	1024	CB	GLN	111	3.914	-0.630	45.588	1.00	19.62
	ATOM	1025	CG	GLN	111	3.460	-0.972	46.992	1.00	29.16
	ATOM	1026	CD	GLN	111	4.507	-1.733	47.779	1.00	35.22
	ATOM	1027	OE1	GLN	111	5.675	-1.338	47.828	1.00	39.00
20	ATOM	1028	NE2	GLN	111	4.096	-2.841	48.393	1.00	38.02
	ATOM	1029	HE21	GLN	111	3.152	-3.094	48.292	1.00	0.00
	ATOM	1030	HE22	GLN	111	4.763	-3.331	48.921	1.00	0.00
	ATOM	1031	C	GLN	111	2.921	-2.732	44.631	1.00	13.55
	ATOM	1032	O	GLN	111	1.858	-2.337	44.164	1.00	13.13
25	ATOM	1033	N	PRO	112	3.064	-3.980	45.117	1.00	15.54
	ATOM	1034	CD	PRO	112	4.324	-4.595	45.571	1.00	14.21
	ATOM	1035	CA	PRO	112	1.962	-4.954	45.169	1.00	14.46
	ATOM	1036	CB	PRO	112	2.616	-6.176	45.814	1.00	17.80
	ATOM	1037	CG	PRO	112	4.043	-6.060	45.391	1.00	18.52
30	ATOM	1038	C	PRO	112	0.818	-4.424	46.036	1.00	12.81
	ATOM	1039	O	PRO	112	1.044	-3.924	47.140	1.00	13.23
	ATOM	1040	N	GLY	113	-0.406	-4.590	45.550	1.00	13.74
	ATOM	1041	H	GLY	113	-0.506	-5.038	44.681	1.00	0.00
	ATOM	1042	CA	GLY	113	-1.585	-4.095	46.242	1.00	16.62
35	ATOM	1043	C	GLY	113	-1.920	-4.452	47.682	1.00	20.03
	ATOM	1044	O	GLY	113	-2.178	-3.564	48.492	1.00	25.17
	ATOM	1045	N	VAL	114	-1.964	-5.742	47.985	1.00	15.08
	ATOM	1046	H	VAL	114	-1.759	-6.328	47.241	1.00	0.00
	ATOM	1047	CA	VAL	114	-2.325	-6.279	49.308	1.00	15.99

	ATOM	1048	CB	VAL	114	-2.159	-5.308	50.525	1.00	15.66
	ATOM	1049	CG1	VAL	114	-2.735	-5.944	51.787	1.00	15.95
	ATOM	1050	CG2	VAL	114	-0.691	-5.029	50.785	1.00	18.12
	ATOM	1051	C	VAL	114	-3.759	-6.788	49.208	1.00	14.14
5	ATOM	1052	O	VAL	114	-4.000	-7.960	49.493	1.00	15.64
	ATOM	1053	N	PHE	115	-4.694	-5.956	48.749	1.00	12.08
	ATOM	1054	H	PHE	115	-4.473	-5.029	48.516	1.00	0.00
	ATOM	1055	CA	PHE	115	-6.065	-6.429	48.583	1.00	8.80
	ATOM	1056	CB	PHE	115	-7.021	-5.316	48.167	1.00	6.19
10	ATOM	1057	CG	PHE	115	-8.474	-5.719	48.214	1.00	3.76
	ATOM	1058	CD1	PHE	115	-8.900	-6.745	49.054	1.00	2.76
	ATOM	1059	CD2	PHE	115	-9.423	-5.046	47.451	1.00	6.51
	ATOM	1060	CE1	PHE	115	-10.253	-7.090	49.141	1.00	5.06
	ATOM	1061	CE2	PHE	115	-10.781	-5.382	47.528	1.00	6.67
15	ATOM	1062	CZ	PHE	115	-11.197	-6.405	48.376	1.00	6.27
	ATOM	1063	C	PHE	115	-5.997	-7.464	47.471	1.00	9.14
	ATOM	1064	O	PHE	115	-6.553	-8.548	47.592	1.00	12.04
	ATOM	1065	N	ASP	116	-5.287	-7.128	46.398	1.00	9.44
	ATOM	1066	H	ASP	116	-4.943	-6.208	46.326	1.00	0.00
20	ATOM	1067	CA	ASP	116	-5.120	-8.048	45.272	1.00	12.42
	ATOM	1068	CB	ASP	116	-4.240	-7.420	44.181	1.00	15.62
	ATOM	1069	CG	ASP	116	-4.968	-6.372	43.349	1.00	19.07
	ATOM	1070	OD1	ASP	116	-6.205	-6.246	43.445	1.00	23.47
	ATOM	1071	OD2	ASP	116	-4.287	-5.679	42.569	1.00	25.14
25	ATOM	1072	C	ASP	116	-4.466	-9.347	45.740	1.00	11.75
	ATOM	1073	O	ASP	116	-4.862	-10.445	45.344	1.00	11.50
	ATOM	1074	N	CLE	117	-3.461	-9.199	46.593	1.00	12.80
	ATOM	1075	H	CLE	117	-3.267	-8.285	46.841	1.00	0.00
	ATOM	1076	CA	CLE	117	-2.717	-10.321	47.135	1.00	14.11
30	ATOM	1077	CB	CLE	117	-1.552	-9.797	47.962	1.00	16.88
	ATOM	1078	SG	CLE	117	-0.415	-11.054	48.533	1.00	22.90
	ATOM	1079	B	CLE	117	1.110	-9.552	50.024	1.20	31.80
	ATOM	1080	C	CLE	117	-3.607	-11.241	47.971	1.00	16.15
	ATOM	1081	O	CLE	117	-3.484	-12.466	47.899	1.00	17.64
35	ATOM	1082	N	LEU	118	-4.509	-10.653	48.753	1.00	15.34
	ATOM	1083	H	LEU	118	-4.574	-9.678	48.794	1.00	0.00
	ATOM	1084	CA	LEU	118	-5.419	-11.430	49.579	1.00	13.10
	ATOM	1085	CB	LEU	118	-5.994	-10.574	50.711	1.00	12.53
	ATOM	1086	CG	LEU	118	-5.204	-10.607	52.027	1.00	17.96

	ATOM	1087	CD1	LEU	118	-3.763	-10.149	51.845	1.00	20.79
	ATOM	1088	CD2	LEU	118	-5.915	-9.758	53.078	1.00	21.05
	ATOM	1089	C	LEU	118	-6.530	-12.068	48.744	1.00	13.66
	ATOM	1090	O	LEU	118	-6.899	-13.220	48.977	1.00	13.82
5	ATOM	1091	N	ARG	119	-7.043	-11.343	47.752	1.00	13.95
	ATOM	1092	H	ARG	119	-6.729	-10.431	47.595	1.00	0.00
	ATOM	1093	CA	ARG	119	-8.097	-11.890	46.891	1.00	16.99
	ATOM	1094	CB	ARG	119	-8.685	-10.835	45.952	1.00	18.77
	ATOM	1095	CG	ARG	119	-9.292	-9.633	46.630	1.00	21.75
10	ATOM	1096	CD	ARG	119	-10.186	-8.859	45.671	1.00	24.22
	ATOM	1097	NE	ARG	119	-9.634	-8.710	44.325	1.00	25.20
	ATOM	1098	HE	ARG	119	-9.753	-9.441	43.686	1.00	0.00
	ATOM	1099	CZ	ARG	119	-8.970	-7.644	43.889	1.00	26.62
	ATOM	1100	NH1	ARG	119	-8.751	-6.613	44.692	1.00	26.88
15	ATOM	1101	HH11	ARG	119	-9.079	-6.630	45.637	1.00	0.00
	ATOM	1102	HH12	ARG	119	-8.258	-5.813	44.357	1.00	0.00
	ATOM	1103	NH2	ARG	119	-8.552	-7.596	42.632	1.00	28.12
	ATOM	1104	HH21	ARG	119	-8.731	-8.366	42.018	1.00	0.00
	ATOM	1105	HH22	ARG	119	-8.055	-6.793	42.296	1.00	0.00
20	ATOM	1106	C	ARG	119	-7.573	-13.042	46.050	1.00	16.34
	ATOM	1107	O	ARG	119	-8.338	-13.911	45.649	1.00	20.19
	ATOM	1108	N	ASP	120	-6.279	-13.038	45.747	1.00	16.82
	ATOM	1109	H	ASP	120	-5.712	-12.290	46.047	1.00	0.00
	ATOM	1110	CA	ASP	120	-5.699	-14.123	44.963	1.00	16.01
25	ATOM	1111	CB	ASP	120	-4.195	-13.924	44.775	1.00	20.39
	ATOM	1112	CG	ASP	120	-3.543	-15.068	43.997	1.00	26.16
	ATOM	1113	OD1	ASP	120	-3.897	-15.260	42.813	1.00	29.33
	ATOM	1114	OD2	ASP	120	-2.682	-15.778	44.570	1.00	25.10
	ATOM	1115	C	ASP	120	-5.972	-15.449	45.668	1.00	12.54
30	ATOM	1116	O	ASP	120	-6.566	-16.346	45.084	1.00	13.46
	ATOM	1117	N	ALA	121	-5.572	-15.539	46.935	1.00	10.31
	ATOM	1118	H	ALA	121	-5.115	-14.768	47.334	1.00	0.00
	ATOM	1119	CA	ALA	121	-5.764	-16.738	47.758	1.00	11.07
	ATOM	1120	CB	ALA	121	-5.155	-16.521	49.141	1.00	9.11
35	ATOM	1121	C	ALA	121	-7.237	-17.132	47.903	1.00	9.94
	ATOM	1122	O	ALA	121	-7.585	-18.311	47.927	1.00	13.51
	ATOM	1123	N	SEM	122	-8.103	-16.140	48.016	1.00	9.68
	ATOM	1124	H	SEM	122	-7.771	-15.218	48.000	1.00	0.00
	ATOM	1125	CA	SEM	122	-9.519	-16.402	48.163	1.00	11.81

	ATOM	1126	CB	SEM	122	-10.233	-15.133	48.605	1.00	19.02
	ATOM	1127	CG	SEM	122	-9.687	-14.587	49.905	1.00	29.28
	ATOM	1128	A	SEM	122	-10.585	-13.021	50.550	1.00	42.69
	ATOM	1129	CE	SEM	122	-9.376	-12.528	51.958	1.00	36.95
5	ATOM	1130	C	SEM	122	-10.151	-16.974	46.903	1.00	9.90
	ATOM	1131	O	SEM	122	-11.056	-17.804	46.988	1.00	10.61
	ATOM	1132	N	VAL	123	-9.693	-16.526	45.737	1.00	10.83
	ATOM	1133	H	VAL	123	-8.993	-15.829	45.711	1.00	0.00
	ATOM	1134	CA	VAL	123	-10.223	-17.029	44.471	1.00	10.83
10	ATOM	1135	CB	VAL	123	-9.796	-16.144	43.277	1.00	11.82
	ATOM	1136	CG1	VAL	123	-10.149	-16.814	41.957	1.00	13.10
	ATOM	1137	CG2	VAL	123	-10.489	-14.799	43.358	1.00	12.23
	ATOM	1138	C	VAL	123	-9.740	-18.469	44.269	1.00	11.72
	ATOM	1139	O	VAL	123	-10.492	-19.332	43.820	1.00	11.90
15	ATOM	1140	N	ARG	124	-8.496	-18.737	44.645	1.00	11.15
	ATOM	1141	H	ARG	124	-7.934	-18.012	44.992	1.00	0.00
	ATOM	1142	CA	ARG	124	-7.952	-20.078	44.521	1.00	10.74
	ATOM	1143	CB	ARG	124	-6.496	-20.113	44.958	1.00	13.48
	ATOM	1144	CG	ARG	124	-5.588	-19.228	44.150	1.00	22.67
20	ATOM	1145	CD	ARG	124	-4.164	-19.371	44.639	1.00	30.29
	ATOM	1146	NE	ARG	124	-3.677	-20.737	44.462	1.00	34.80
	ATOM	1147	HE	ARG	124	-3.798	-21.375	45.202	1.00	0.00
	ATOM	1148	CZ	ARG	124	-3.075	-21.173	43.359	1.00	36.89
	ATOM	1149	NH1	ARG	124	-2.885	-20.352	42.330	1.00	35.72
25	ATOM	1150	HH11	ARG	124	-3.203	-19.404	42.371	1.00	0.00
	ATOM	1151	HH12	ARG	124	-2.428	-20.690	41.503	1.00	0.00
	ATOM	1152	NH2	ARG	124	-2.646	-22.427	43.292	1.00	38.58
	ATOM	1153	HH21	ARG	124	-2.777	-23.034	44.072	1.00	0.00
	ATOM	1154	HH22	ARG	124	-2.190	-22.758	42.469	1.00	0.00
30	ATOM	1155	C	ARG	124	-8.750	-20.989	45.426	1.00	9.71
	ATOM	1156	O	ARG	124	-9.144	-22.079	45.029	1.00	10.87
	ATOM	1157	N	ASP	125	-9.004	-20.526	46.644	1.00	11.13
	ATOM	1158	H	ASP	125	-8.663	-19.644	46.891	1.00	0.00
	ATOM	1159	CA	ASP	125	-9.753	-21.311	47.617	1.00	10.38
35	ATOM	1160	CB	ASP	125	-9.765	-20.600	48.974	1.00	13.20
	ATOM	1161	CG	ASP	125	-10.489	-21.397	50.051	1.00	18.39
	ATOM	1162	OD1	ASP	125	-11.393	-20.831	50.706	1.00	21.49
	ATOM	1163	OD2	ASP	125	-10.158	-22.590	50.238	1.00	18.02
	ATOM	1164	C	ASP	125	-11.174	-21.617	47.140	1.00	8.61

	ATOM	1165	O	ASP	125	-11.652	-22.741	47.266	1.00	11.19
	ATOM	1166	N	TYR	126	-11.840	-20.621	46.579	1.00	10.44
	ATOM	1167	H	TYR	126	-11.410	-19.747	46.499	1.00	0.00
	ATOM	1168	CA	TYR	126	-13.198	-20.802	46.074	1.00	11.59
5	ATOM	1169	CB	TYR	126	-13.780	-19.452	45.641	1.00	11.23
	ATOM	1170	CG	TYR	126	-15.206	-19.523	45.138	1.00	12.70
	ATOM	1171	CD1	TYR	126	-16.275	-19.332	46.009	1.00	14.14
	ATOM	1172	CE1	TYR	126	-17.589	-19.395	45.562	1.00	17.06
	ATOM	1173	CD2	TYR	126	-15.488	-19.784	43.794	1.00	13.43
10	ATOM	1174	CE2	TYR	126	-16.812	-19.856	43.334	1.00	15.60
	ATOM	1175	CZ	TYR	126	-17.858	-19.655	44.228	1.00	16.20
	ATOM	1176	OH	TYR	126	-19.173	-19.702	43.806	1.00	16.29
	ATOM	1177	HH	TYR	126	-19.739	-19.596	44.573	1.00	0.00
	ATOM	1178	C	TYR	126	-13.248	-21.776	44.888	1.00	13.13
15	ATOM	1179	O	TYR	126	-14.131	-22.629	44.815	1.00	11.60
	ATOM	1180	N	VAL	127	-12.318	-21.618	43.948	1.00	13.17
	ATOM	1181	H	VAL	127	-11.653	-20.905	44.039	1.00	0.00
	ATOM	1182	CA	VAL	127	-12.272	-22.469	42.764	1.00	13.56
	ATOM	1183	CB	VAL	127	-11.275	-21.918	41.712	1.00	13.44
20	ATOM	1184	CG1	VAL	127	-11.230	-22.826	40.480	1.00	14.23
	ATOM	1185	CG2	VAL	127	-11.684	-20.512	41.302	1.00	10.59
	ATOM	1186	C	VAL	127	-11.941	-23.916	43.115	1.00	14.89
	ATOM	1187	O	VAL	127	-12.527	-24.843	42.560	1.00	16.19
	ATOM	1188	N	ARG	128	-11.022	-24.112	44.052	1.00	15.44
25	ATOM	1189	H	ARG	128	-10.583	-23.335	44.470	1.00	0.00
	ATOM	1190	CA	ARG	128	-10.640	-25.450	44.473	1.00	15.05
	ATOM	1191	CB	ARG	128	-9.422	-25.365	45.388	1.00	19.03
	ATOM	1192	CG	ARG	128	-8.887	-26.701	45.848	1.00	24.57
	ATOM	1193	CD	ARG	128	-7.521	-26.528	46.483	1.00	29.44
30	ATOM	1194	NE	ARG	128	-7.551	-25.528	47.544	1.00	32.78
	ATOM	1195	HE	ARG	128	-8.319	-25.519	48.151	1.00	0.00
	ATOM	1196	CZ	ARG	128	-6.614	-24.606	47.732	1.00	32.41
	ATOM	1197	NH1	ARG	128	-5.557	-24.541	46.929	1.00	28.66
	ATOM	1198	HH11	ARG	128	-5.461	-25.186	46.170	1.00	0.00
35	ATOM	1199	HH12	ARG	128	-4.855	-23.840	47.078	1.00	0.00
	ATOM	1200	NH2	ARG	128	-6.742	-23.746	48.729	1.00	34.68
	ATOM	1201	HH21	ARG	128	-7.528	-23.786	49.343	1.00	0.00
	ATOM	1202	HH22	ARG	128	-6.015	-23.087	48.879	1.00	0.00
	ATOM	1203	C	ARG	128	-11.806	-26.118	45.196	1.00	16.91

	ATOM	1204	O	ARG	128	-12.185	-27.241	44.884	1.00	16.06
	ATOM	1205	N	GLN	129	-12.386	-25.399	46.149	1.00	17.04
	ATOM	1206	H	GLN	129	-12.025	-24.508	46.347	1.00	0.00
	ATOM	1207	CA	GLN	129	-13.516	-25.886	46.924	1.00	17.75
5	ATOM	1208	CB	GLN	129	-13.922	-24.813	47.941	1.00	24.23
	ATOM	1209	CG	GLN	129	-15.184	-25.116	48.735	1.00	35.10
	ATOM	1210	CD	GLN	129	-15.850	-23.854	49.274	1.00	43.22
	ATOM	1211	OE1	GLN	129	-16.998	-23.547	48.934	1.00	45.61
	ATOM	1212	NE2	GLN	129	-15.134	-23.120	50.124	1.00	44.34
10	ATOM	1213	HE21	GLN	129	-14.232	-23.402	50.371	1.00	0.00
	ATOM	1214	HE22	GLN	129	-15.573	-22.317	50.462	1.00	0.00
	ATOM	1215	C	GLN	129	-14.707	-26.215	46.024	1.00	14.94
	ATOM	1216	O	GLN	129	-15.374	-27.227	46.202	1.00	17.51
	ATOM	1217	N	THR	130	-14.967	-25.359	45.051	1.00	12.68
15	ATOM	1218	H	THR	130	-14.422	-24.549	44.954	1.00	0.00
	ATOM	1219	CA	THR	130	-16.094	-25.547	44.151	1.00	14.74
	ATOM	1220	CB	THR	130	-16.473	-24.207	43.491	1.00	16.50
	ATOM	1221	OG1	THR	130	-16.680	-23.223	44.513	1.00	15.75
	ATOM	1222	HG1	THR	130	-17.352	-23.533	45.132	1.00	0.00
20	ATOM	1223	CG2	THR	130	-17.748	-24.347	42.666	1.00	16.34
	ATOM	1224	C	THR	130	-15.909	-26.599	43.063	1.00	14.23
	ATOM	1225	O	THR	130	-16.746	-27.481	42.894	1.00	15.79
	ATOM	1226	N	TRP	131	-14.812	-26.507	42.329	1.00	13.82
	ATOM	1227	H	TRP	131	-14.156	-25.807	42.510	1.00	0.00
25	ATOM	1228	CA	TRP	131	-14.551	-27.429	41.235	1.00	12.96
	ATOM	1229	CB	TRP	131	-13.790	-26.702	40.128	1.00	13.33
	ATOM	1230	CG	TRP	131	-14.586	-25.559	39.589	1.00	15.21
	ATOM	1231	CD2	TRP	131	-15.383	-25.551	38.398	1.00	16.02
	ATOM	1232	CE2	TRP	131	-16.037	-24.299	38.342	1.00	16.98
30	ATOM	1233	CE3	TRP	131	-15.610	-26.483	37.375	1.00	19.06
	ATOM	1234	CD1	TRP	131	-14.773	-24.339	40.183	1.00	16.24
	ATOM	1235	NE1	TRP	131	-15.650	-23.583	39.444	1.00	19.42
	ATOM	1236	HE1	TRP	131	-15.968	-22.696	39.715	1.00	0.00
	ATOM	1237	CZ2	TRP	131	-16.907	-23.952	37.301	1.00	17.20
35	ATOM	1238	CZ3	TRP	131	-16.477	-26.137	36.340	1.00	19.80
	ATOM	1239	CH2	TRP	131	-17.114	-24.880	36.312	1.00	18.84
	ATOM	1240	C	TRP	131	-13.852	-28.712	41.629	1.00	13.29
	ATOM	1241	O	TRP	131	-13.892	-29.692	40.883	1.00	12.51
	ATOM	1242	N	LYS	132	-13.245	-28.710	42.813	1.00	15.49

	ATOM	1243	H	LYS	132	-13.261	-27.900	43.361	1.00	0.00
	ATOM	1244	CA	LYS	132	-12.531	-29.872	43.344	1.00	18.55
	ATOM	1245	CB	LYS	132	-13.467	-31.090	43.451	1.00	17.43
	ATOM	1246	CG	LYS	132	-14.374	-31.116	44.670	1.00	19.61
5	ATOM	1247	CD	LYS	132	-15.519	-30.137	44.557	1.00	21.76
	ATOM	1248	CE	LYS	132	-16.482	-30.273	45.727	1.00	20.70
	ATOM	1249	NZ	LYS	132	-15.842	-29.954	47.029	1.00	23.81
	ATOM	1250	HZ1	LYS	132	-15.472	-28.987	47.004	1.00	0.00
	ATOM	1251	HZ2	LYS	132	-15.060	-30.615	47.195	1.00	0.00
10	ATOM	1252	HZ3	LYS	132	-16.535	-30.033	47.800	1.00	0.00
	ATOM	1253	C	LYS	132	-11.310	-30.220	42.496	1.00	20.84
	ATOM	1254	O	LYS	132	-10.973	-31.392	42.325	1.00	21.28
	ATOM	1255	N	LEU	133	-10.635	-29.195	41.991	1.00	22.03
	ATOM	1256	H	LEU	133	-10.915	-28.292	42.231	1.00	0.00
15	ATOM	1257	CA	LEU	133	-9.459	-29.383	41.149	1.00	23.93
	ATOM	1258	CB	LEU	133	-9.539	-28.464	39.930	1.00	22.92
	ATOM	1259	CG	LEU	133	-10.724	-28.710	38.993	1.00	21.45
	ATOM	1260	CD1	LEU	133	-10.779	-27.638	37.930	1.00	16.33
	ATOM	1261	CD2	LEU	133	-10.608	-30.091	38.365	1.00	18.90
20	ATOM	1262	C	LEU	133	-8.158	-29.131	41.897	1.00	25.56
	ATOM	1263	O	LEU	133	-8.137	-28.456	42.921	1.00	24.95
	ATOM	1264	N	GLU	134	-7.068	-29.675	41.372	1.00	30.15
	ATOM	1265	H	GLU	134	-7.120	-30.201	40.549	1.00	0.00
	ATOM	1266	CA	GLU	134	-5.758	-29.501	41.983	1.00	35.39
25	ATOM	1267	CB	GLU	134	-5.418	-30.687	42.899	1.00	40.72
	ATOM	1268	CG	GLU	134	-6.137	-30.693	44.262	1.00	47.74
	ATOM	1269	CD	GLU	134	-5.572	-29.689	45.276	1.00	52.02
	ATOM	1270	OE1	GLU	134	-6.063	-29.681	46.427	1.00	52.20
	ATOM	1271	OE2	GLU	134	-4.643	-28.916	44.940	1.00	54.41
30	ATOM	1272	C	GLU	134	-4.694	-29.361	40.904	1.00	35.44
	ATOM	1273	O	GLU	134	-4.968	-29.569	39.719	1.00	35.63
	ATOM	1274	N	GLY	135	-3.494	-28.965	41.316	1.00	34.91
	ATOM	1275	H	GLY	135	-3.374	-28.756	42.265	1.00	0.00
	ATOM	1276	CA	GLY	135	-2.392	-28.807	40.382	1.00	34.73
35	ATOM	1277	C	GLY	135	-2.686	-27.917	39.189	1.00	34.52
	ATOM	1278	O	GLY	135	-3.416	-26.927	39.297	1.00	34.03
	ATOM	1279	N	GLU	136	-2.149	-28.302	38.035	1.00	34.50
	ATOM	1280	H	GLU	136	-1.609	-29.117	38.031	1.00	0.00
	ATOM	1281	CA	GLU	136	-2.324	-27.544	36.799	1.00	34.12

	ATOM	1282	CB	GLU	136	-1.543	-28.203	35.658	1.00	38.90
	ATOM	1283	CG	GLU	136	-1.203	-27.256	34.511	1.00	43.32
	ATOM	1284	CD	GLU	136	-0.456	-26.009	34.980	1.00	46.70
	ATOM	1285	OE1	GLU	136	0.595	-26.145	35.650	1.00	48.76
5	ATOM	1286	OE2	GLU	136	-0.930	-24.889	34.686	1.00	46.11
	ATOM	1287	C	GLU	136	-3.787	-27.359	36.399	1.00	31.34
	ATOM	1288	O	GLU	136	-4.148	-26.351	35.787	1.00	28.55
	ATOM	1289	N	ALA	137	-4.625	-28.329	36.756	1.00	29.45
	ATOM	1290	H	ALA	137	-4.285	-29.104	37.238	1.00	0.00
10	ATOM	1291	CA	ALA	137	-6.048	-28.258	36.440	1.00	26.31
	ATOM	1292	CB	ALA	137	-6.740	-29.548	36.842	1.00	26.49
	ATOM	1293	C	ALA	137	-6.652	-27.072	37.181	1.00	22.29
	ATOM	1294	O	ALA	137	-7.442	-26.317	36.622	1.00	22.04
	ATOM	1295	N	LEU	138	-6.241	-26.894	38.432	1.00	20.21
15	ATOM	1296	H	LEU	138	-5.577	-27.514	38.813	1.00	0.00
	ATOM	1297	CA	LEU	138	-6.725	-25.792	39.249	1.00	20.63
	ATOM	1298	CB	LEU	138	-6.223	-25.941	40.686	1.00	17.38
	ATOM	1299	CG	LEU	138	-6.519	-24.807	41.670	1.00	17.34
	ATOM	1300	CD1	LEU	138	-8.013	-24.543	41.738	1.00	16.71
20	ATOM	1301	CD2	LEU	138	-5.986	-25.170	43.040	1.00	15.22
	ATOM	1302	C	LEU	138	-6.243	-24.469	38.659	1.00	21.98
	ATOM	1303	O	LEU	138	-7.027	-23.528	38.513	1.00	21.24
	ATOM	1304	N	GLU	139	-4.965	-24.415	38.288	1.00	23.87
	ATOM	1305	H	GLU	139	-4.423	-25.227	38.393	1.00	0.00
25	ATOM	1306	CA	GLU	139	-4.372	-23.209	37.713	1.00	25.73
	ATOM	1307	CB	GLU	139	-2.914	-23.454	37.334	1.00	28.07
	ATOM	1308	CG	GLU	139	-2.052	-23.944	38.479	1.00	33.00
	ATOM	1309	CD	GLU	139	-2.216	-23.110	39.733	1.00	37.06
	ATOM	1310	OE1	GLU	139	-2.506	-23.697	40.796	1.00	41.81
30	ATOM	1311	OE2	GLU	139	-2.062	-21.872	39.662	1.00	39.33
	ATOM	1312	C	GLU	139	-5.138	-22.737	36.487	1.00	26.80
	ATOM	1313	O	GLU	139	-5.462	-21.555	36.362	1.00	25.34
	ATOM	1314	N	GLN	140	-5.434	-23.669	35.588	1.00	29.70
	ATOM	1315	H	GLN	140	-5.140	-24.594	35.755	1.00	0.00
35	ATOM	1316	CA	GLN	140	-6.172	-23.361	34.369	1.00	31.92
	ATOM	1317	CB	GLN	140	-6.270	-24.605	33.479	1.00	38.06
	ATOM	1318	CG	GLN	140	-4.935	-25.155	32.994	1.00	45.35
	ATOM	1319	CD	GLN	140	-5.088	-26.459	32.218	1.00	52.31
	ATOM	1320	OE1	GLN	140	-4.434	-27.461	32.523	1.00	54.99

	ATOM	1321	NE2	GLN	140	-5.958	-26.453	31.212	1.00	53.53
	ATOM	1322	HE21	GLN	140	-6.453	-25.632	31.016	1.00	0.00
	ATOM	1323	HE22	GLN	140	-6.057	-27.290	30.723	1.00	0.00
	ATOM	1324	C	GLN	140	-7.579	-22.853	34.690	1.00	30.17
5	ATOM	1325	O	GLN	140	-8.068	-21.914	34.058	1.00	29.36
	ATOM	1326	N	ALA	141	-8.218	-23.472	35.680	1.00	28.89
	ATOM	1327	H	ALA	141	-7.777	-24.201	36.166	1.00	0.00
	ATOM	1328	CA	ALA	141	-9.572	-23.099	36.084	1.00	27.36
	ATOM	1329	CB	ALA	141	-10.154	-24.143	37.028	1.00	25.84
10	ATOM	1330	C	ALA	141	-9.665	-21.711	36.709	1.00	26.93
	ATOM	1331	O	ALA	141	-10.584	-20.963	36.396	1.00	25.78
	ATOM	1332	N	ILE	142	-8.725	-21.358	37.581	1.00	27.95
	ATOM	1333	H	ILE	142	-8.010	-22.001	37.791	1.00	0.00
	ATOM	1334	CA	ILE	142	-8.771	-20.043	38.209	1.00	30.29
15	ATOM	1335	CB	ILE	142	-7.703	-19.856	39.321	1.00	32.16
	ATOM	1336	CG2	ILE	142	-7.763	-21.010	40.310	1.00	31.60
	ATOM	1337	CG1	ILE	142	-6.303	-19.742	38.722	1.00	38.22
	ATOM	1338	CD	ILE	142	-5.205	-19.539	39.750	1.00	41.97
	ATOM	1339	C	ILE	142	-8.628	-18.955	37.153	1.00	30.56
20	ATOM	1340	O	ILE	142	-9.256	-17.911	37.253	1.00	32.19
	ATOM	1341	N	ILE	143	-7.847	-19.223	36.111	1.00	31.49
	ATOM	1342	H	ILE	143	-7.382	-20.088	36.069	1.00	0.00
	ATOM	1343	CA	ILE	143	-7.656	-18.246	35.044	1.00	32.26
	ATOM	1344	CB	ILE	143	-6.618	-18.736	34.000	1.00	34.28
25	ATOM	1345	CG2	ILE	143	-6.480	-17.728	32.868	1.00	34.40
	ATOM	1346	CG1	ILE	143	-5.254	-18.975	34.661	1.00	36.63
	ATOM	1347	CD	ILE	143	-4.561	-17.724	35.179	1.00	39.46
	ATOM	1348	C	ILE	143	-8.984	-17.951	34.342	1.00	30.93
	ATOM	1349	O	ILE	143	-9.295	-16.799	34.052	1.00	30.08
30	ATOM	1350	N	SER	144	-9.776	-18.989	34.100	1.00	30.90
	ATOM	1351	H	SER	144	-9.524	-19.901	34.367	1.00	0.00
	ATOM	1352	CA	SER	144	-11.056	-18.826	33.427	1.00	33.20
	ATOM	1353	CB	SER	144	-11.434	-20.123	32.704	1.00	35.30
	ATOM	1354	OG	SER	144	-11.353	-21.242	33.569	1.00	40.36
35	ATOM	1355	HG	SER	144	-11.540	-22.026	33.050	1.00	0.00
	ATOM	1356	C	SER	144	-12.197	-18.375	34.343	1.00	34.38
	ATOM	1357	O	SER	144	-13.103	-17.653	33.920	1.00	34.88
	ATOM	1358	N	GLN	145	-12.154	-18.803	35.598	1.00	34.59
	ATOM	1359	H	GLN	145	-11.420	-19.393	35.855	1.00	0.00

	ATOM	1360	CA	GLN	145	-13.189	-18.444	36.557	1.00	33.70
	ATOM	1361	CB	GLN	145	-13.383	-19.572	37.571	1.00	33.70
	ATOM	1362	CG	GLN	145	-13.934	-20.859	36.978	1.00	35.74
	ATOM	1363	CD	GLN	145	-15.369	-20.728	36.503	1.00	37.42
5	ATOM	1364	OE1	GLN	145	-15.699	-21.098	35.374	1.00	39.84
	ATOM	1365	NE2	GLN	145	-16.238	-20.227	37.374	1.00	38.81
	ATOM	1366	HE21	GLN	145	-15.932	-19.964	38.263	1.00	0.00
	ATOM	1367	HE22	GLN	145	-17.171	-20.156	37.086	1.00	0.00
	ATOM	1368	C	GLN	145	-12.948	-17.124	37.292	1.00	32.75
10	ATOM	1369	O	GLN	145	-13.905	-16.450	37.668	1.00	33.82
	ATOM	1370	N	ALA	146	-11.687	-16.735	37.463	1.00	32.02
	ATOM	1371	H	ALA	146	-10.979	-17.277	37.078	1.00	0.00
	ATOM	1372	CA	ALA	146	-11.343	-15.500	38.179	1.00	34.00
	ATOM	1373	CB	ALA	146	-9.858	-15.167	38.003	1.00	32.05
15	ATOM	1374	C	ALA	146	-12.199	-14.278	37.841	1.00	35.44
	ATOM	1375	O	ALA	146	-12.710	-13.607	38.742	1.00	36.48
	ATOM	1376	N	PRO	147	-12.371	-13.970	36.543	1.00	36.46
	ATOM	1377	CD	PRO	147	-11.711	-14.566	35.365	1.00	36.36
	ATOM	1378	CA	PRO	147	-13.178	-12.812	36.145	1.00	35.69
20	ATOM	1379	CB	PRO	147	-13.108	-12.872	34.621	1.00	37.74
	ATOM	1380	CG	PRO	147	-11.741	-13.432	34.380	1.00	37.31
	ATOM	1381	C	PRO	147	-14.627	-12.823	36.632	1.00	35.01
	ATOM	1382	O	PRO	147	-15.170	-11.781	37.008	1.00	34.92
	ATOM	1383	N	GLN	148	-15.232	-14.005	36.662	1.00	34.44
25	ATOM	1384	H	GLN	148	-14.719	-14.803	36.413	1.00	0.00
	ATOM	1385	CA	GLN	148	-16.627	-14.155	37.072	1.00	36.11
	ATOM	1386	CB	GLN	148	-17.194	-15.465	36.507	1.00	40.50
	ATOM	1387	CG	GLN	148	-17.002	-15.634	34.996	1.00	43.75
	ATOM	1388	CD	GLN	148	-17.614	-14.499	34.198	1.00	47.86
30	ATOM	1389	OE1	GLN	148	-16.915	-13.779	33.482	1.00	49.23
	ATOM	1390	NE2	GLN	148	-18.925	-14.330	34.319	1.00	49.03
	ATOM	1391	HE21	GLN	148	-19.440	-14.926	34.897	1.00	0.00
	ATOM	1392	HE22	GLN	148	-19.303	-13.595	33.801	1.00	0.00
	ATOM	1393	C	GLN	148	-16.892	-14.083	38.581	1.00	34.17
35	ATOM	1394	O	GLN	148	-17.963	-13.645	39.018	1.00	34.12
	ATOM	1395	N	VAL	149	-15.924	-14.518	39.378	1.00	30.55
	ATOM	1396	H	VAL	149	-15.084	-14.843	38.983	1.00	0.00
	ATOM	1397	CA	VAL	149	-16.084	-14.506	40.824	1.00	27.34
	ATOM	1398	CB	VAL	149	-15.730	-15.874	41.424	1.00	26.70

	ATOM	1399	CG1	VAL	149	-16.628	-16.942	40.829	1.00	27.05
	ATOM	1400	CG2	VAL	149	-14.271	-16.202	41.164	1.00	25.34
	ATOM	1401	C	VAL	149	-15.258	-13.418	41.506	1.00	27.10
	ATOM	1402	O	VAL	149	-15.220	-13.341	42.732	1.00	26.82
5	ATOM	1403	N	GLU	150	-14.622	-12.565	40.708	1.00	27.77
	ATOM	1404	H	GLU	150	-14.683	-12.695	39.739	1.00	0.00
	ATOM	1405	CA	GLU	150	-13.795	-11.477	41.229	1.00	28.17
	ATOM	1406	CB	GLU	150	-13.249	-10.616	40.078	1.00	32.48
	ATOM	1407	CG	GLU	150	-11.848	-10.013	40.336	1.00	42.10
10	ATOM	1408	CD	GLU	150	-11.772	-8.484	40.177	1.00	43.81
	ATOM	1409	OE1	GLU	150	-12.480	-7.918	39.313	1.00	41.18
	ATOM	1410	OE2	GLU	150	-10.981	-7.850	40.915	1.00	45.59
	ATOM	1411	C	GLU	150	-14.585	-10.600	42.201	1.00	24.18
	ATOM	1412	O	GLU	150	-14.179	-10.415	43.344	1.00	22.05
15	ATOM	1413	N	LYS	151	-15.721	-10.083	41.749	1.00	21.94
	ATOM	1414	H	LYS	151	-15.998	-10.281	40.831	1.00	0.00
	ATOM	1415	CA	LYS	151	-16.552	-9.225	42.584	1.00	22.44
	ATOM	1416	CB	LYS	151	-17.721	-8.646	41.784	1.00	25.52
	ATOM	1417	CG	LYS	151	-17.297	-7.656	40.698	1.00	33.26
20	ATOM	1418	CD	LYS	151	-16.749	-6.357	41.293	1.00	36.27
	ATOM	1419	CE	LYS	151	-15.910	-5.572	40.282	1.00	36.61
	ATOM	1420	NZ	LYS	151	-14.684	-6.337	39.897	1.00	38.17
	ATOM	1421	HZ1	LYS	151	-14.965	-7.218	39.418	1.00	0.00
	ATOM	1422	HZ2	LYS	151	-14.135	-6.581	40.747	1.00	0.00
25	ATOM	1423	HZ3	LYS	151	-14.080	-5.784	39.256	1.00	0.00
	ATOM	1424	C	LYS	151	-17.064	-9.945	43.820	1.00	20.52
	ATOM	1425	O	LYS	151	-16.935	-9.430	44.925	1.00	21.76
	ATOM	1426	N	LEU	152	-17.620	-11.139	43.633	1.00	18.37
	ATOM	1427	H	LEU	152	-17.693	-11.501	42.726	1.00	0.00
30	ATOM	1428	CA	LEU	152	-18.147	-11.936	44.741	1.00	17.20
	ATOM	1429	CB	LEU	152	-18.532	-13.336	44.249	1.00	18.20
	ATOM	1430	CG	LEU	152	-18.958	-14.382	45.287	1.00	23.16
	ATOM	1431	CD1	LEU	152	-20.324	-14.025	45.859	1.00	21.89
	ATOM	1432	CD2	LEU	152	-18.993	-15.771	44.648	1.00	22.05
35	ATOM	1433	C	LEU	152	-17.113	-12.059	45.856	1.00	15.24
	ATOM	1434	O	LEU	152	-17.408	-11.798	47.023	1.00	14.43
	ATOM	1435	N	ILE	153	-15.896	-12.436	45.482	1.00	12.34
	ATOM	1436	H	ILE	153	-15.725	-12.621	44.531	1.00	0.00
	ATOM	1437	CA	ILE	153	-14.817	-12.595	46.441	1.00	13.12

	ATOM	1438	CB	ILE	153	-13.580	-13.261	45.792	1.00	12.78
	ATOM	1439	CG2	ILE	153	-12.498	-13.469	46.813	1.00	10.18
	ATOM	1440	CG1	ILE	153	-13.962	-14.611	45.182	1.00	13.04
	ATOM	1441	CD	ILE	153	-14.603	-15.557	46.135	1.00	12.82
5	ATOM	1442	C	ILE	153	-14.418	-11.265	47.081	1.00	12.71
	ATOM	1443	O	ILE	153	-14.266	-11.189	48.297	1.00	14.81
	ATOM	1444	N	ALA	154	-14.299	-10.212	46.276	1.00	11.61
	ATOM	1445	H	ALA	154	-14.478	-10.311	45.317	1.00	0.00
	ATOM	1446	CA	ALA	154	-13.914	-8.897	46.789	1.00	11.24
10	ATOM	1447	CB	ALA	154	-13.702	-7.932	45.643	1.00	8.04
	ATOM	1448	C	ALA	154	-14.918	-8.308	47.788	1.00	11.11
	ATOM	1449	O	ALA	154	-14.547	-7.850	48.872	1.00	8.33
	ATOM	1450	N	THR	155	-16.192	-8.345	47.432	1.00	11.93
	ATOM	1451	H	THR	155	-16.462	-8.779	46.599	1.00	0.00
15	ATOM	1452	CA	THR	155	-17.232	-7.793	48.285	1.00	16.85
	ATOM	1453	CB	THR	155	-18.566	-7.654	47.509	1.00	19.45
	ATOM	1454	OG1	THR	155	-19.034	-8.949	47.108	1.00	23.26
	ATOM	1455	HG1	THR	155	-19.810	-8.856	46.545	1.00	0.00
	ATOM	1456	CG2	THR	155	-18.366	-6.795	46.261	1.00	19.86
20	ATOM	1457	C	THR	155	-17.450	-8.583	49.578	1.00	17.70
	ATOM	1458	O	THR	155	-18.015	-8.059	50.545	1.00	16.86
	ATOM	1459	N	THR	156	-16.945	-9.812	49.622	1.00	17.24
	ATOM	1460	H	THR	156	-16.483	-10.203	48.844	1.00	0.00
	ATOM	1461	CA	THR	156	-17.110	-10.641	50.805	1.00	16.73
25	ATOM	1462	CB	THR	156	-17.781	-11.991	50.436	1.00	18.95
	ATOM	1463	OG1	THR	156	-18.349	-12.579	51.610	1.00	28.41
	ATOM	1464	HG1	THR	156	-17.628	-12.777	52.224	1.00	0.00
	ATOM	1465	CG2	THR	156	-16.782	-12.958	49.825	1.00	16.01
	ATOM	1466	C	THR	156	-15.818	-10.864	51.607	1.00	15.60
30	ATOM	1467	O	THR	156	-15.853	-11.468	52.681	1.00	14.74
	ATOM	1468	N	ALA	157	-14.712	-10.291	51.134	1.00	11.48
	ATOM	1469	H	ALA	157	-14.745	-9.796	50.286	1.00	0.00
	ATOM	1470	CA	ALA	157	-13.404	-10.426	51.780	1.00	9.54
	ATOM	1471	CB	ALA	157	-12.342	-9.713	50.961	1.00	5.51
35	ATOM	1472	C	ALA	157	-13.312	-9.981	53.239	1.00	8.69
	ATOM	1473	O	ALA	157	-12.471	-10.476	53.987	1.00	10.31
	ATOM	1474	N	HIS	158	-14.150	-9.037	53.648	1.00	10.04
	ATOM	1475	H	HIS	158	-14.761	-8.654	52.995	1.00	0.00
	ATOM	1476	CA	HIS	158	-14.119	-8.550	55.029	1.00	9.74

	ATOM	1477	CB	HIS	158	-15.043	-7.335	55.185	1.00	8.60
	ATOM	1478	CG	HIS	158	-16.494	-7.631	54.940	1.00	10.37
	ATOM	1479	CD2	HIS	158	-17.508	-7.875	55.801	1.00	6.93
	ATOM	1480	ND1	HIS	158	-17.045	-7.685	53.677	1.00	9.52
5	ATOM	1481	HD1	HIS	158	-16.621	-7.506	52.814	1.00	0.00
	ATOM	1482	CE1	HIS	158	-18.336	-7.952	53.771	1.00	8.21
	ATOM	1483	NE2	HIS	158	-18.641	-8.073	55.052	1.00	7.61
	ATOM	1484	HE2	HIS	158	-19.542	-8.310	55.393	1.00	0.00
	ATOM	1485	C	HIS	158	-14.463	-9.621	56.070	1.00	11.48
10	ATOM	1486	O	HIS	158	-13.948	-9.602	57.189	1.00	12.15
	ATOM	1487	N	GLU	159	-15.292	-10.580	55.673	1.00	12.68
	ATOM	1488	H	GLU	159	-15.604	-10.612	54.744	1.00	0.00
	ATOM	1489	CA	GLU	159	-15.734	-11.657	56.554	1.00	16.34
	ATOM	1490	CB	GLU	159	-16.826	-12.477	55.870	1.00	19.60
15	ATOM	1491	CG	GLU	159	-18.109	-11.703	55.586	1.00	22.36
	ATOM	1492	CD	GLU	159	-19.133	-12.516	54.811	1.00	25.59
	ATOM	1493	OE1	GLU	159	-18.923	-13.733	54.614	1.00	27.02
	ATOM	1494	OE2	GLU	159	-20.157	-11.933	54.396	1.00	30.21
	ATOM	1495	C	GLU	159	-14.648	-12.601	57.041	1.00	17.61
20	ATOM	1496	O	GLU	159	-14.881	-13.388	57.958	1.00	19.13
	ATOM	1497	N	ARG	160	-13.480	-12.552	56.413	1.00	18.47
	ATOM	1498	H	ARG	160	-13.336	-11.921	55.678	1.00	0.00
	ATOM	1499	CA	ARG	160	-12.380	-13.428	56.799	1.00	20.02
	ATOM	1500	CB	ARG	160	-11.637	-13.926	55.555	1.00	23.13
25	ATOM	1501	CG	ARG	160	-12.539	-14.448	54.449	1.00	29.15
	ATOM	1502	CD	ARG	160	-11.737	-15.149	53.364	1.00	34.59
	ATOM	1503	NE	ARG	160	-11.157	-16.394	53.856	1.00	37.25
	ATOM	1504	HE	ARG	160	-10.278	-16.359	54.280	1.00	0.00
	ATOM	1505	CZ	ARG	160	-11.735	-17.585	53.744	1.00	39.25
30	ATOM	1506	NH1	ARG	160	-12.907	-17.705	53.141	1.00	40.34
	ATOM	1507	HH11	ARG	160	-13.373	-16.903	52.774	1.00	0.00
	ATOM	1508	HH12	ARG	160	-13.329	-18.607	53.067	1.00	0.00
	ATOM	1509	NH2	ARG	160	-11.177	-18.647	54.308	1.00	43.48
	ATOM	1510	HH21	ARG	160	-10.326	-18.543	54.826	1.00	0.00
35	ATOM	1511	HH22	ARG	160	-11.612	-19.546	54.229	1.00	0.00
	ATOM	1512	C	ARG	160	-11.407	-12.697	57.711	1.00	18.50
	ATOM	1513	O	ARG	160	-10.500	-13.298	58.284	1.00	17.09
	ATOM	1514	N	SEM	161	-11.610	-11.391	57.841	1.00	18.54
	ATOM	1515	H	SEM	161	-12.394	-10.969	57.430	1.00	0.00

	ATOM	1516	CA	SEM	161	-10.746	-10.550	58.651	1.00	16.58
	ATOM	1517	CB	SEM	161	-10.814	-9.109	58.146	1.00	18.99
	ATOM	1518	CG	SEM	161	-10.507	-8.961	56.669	1.00	21.84
	ATOM	1519	A	SEM	161	-8.831	-9.824	56.217	1.00	39.69
5	ATOM	1520	CE	SEM	161	-7.469	-8.584	56.687	1.00	28.84
	ATOM	1521	C	SEM	161	-11.119	-10.620	60.125	1.00	15.27
	ATOM	1522	O	SEM	161	-12.299	-10.641	60.470	1.00	13.98
	ATOM	1523	N	PRO	162	-10.111	-10.624	61.018	1.00	15.37
	ATOM	1524	CD	PRO	162	-8.671	-10.585	60.713	1.00	16.16
10	ATOM	1525	CA	PRO	162	-10.329	-10.689	62.467	1.00	15.23
	ATOM	1526	CB	PRO	162	-8.905	-10.745	63.027	1.00	15.71
	ATOM	1527	CG	PRO	162	-8.091	-10.035	61.988	1.00	15.90
	ATOM	1528	C	PRO	162	-11.121	-9.514	63.039	1.00	16.06
	ATOM	1529	O	PRO	162	-11.734	-9.640	64.096	1.00	15.21
15	ATOM	1530	N	TRP	163	-11.106	-8.375	62.348	1.00	14.60
	ATOM	1531	H	TRP	163	-10.610	-8.340	61.509	1.00	0.00
	ATOM	1532	CA	TRP	163	-11.833	-7.199	62.813	1.00	10.63
	ATOM	1533	CB	TRP	163	-11.211	-5.906	62.271	1.00	9.82
	ATOM	1534	CG	TRP	163	-10.807	-5.919	60.808	1.00	8.73
20	ATOM	1535	CD2	TRP	163	-11.667	-5.754	59.667	1.00	4.19
	ATOM	1536	CE2	TRP	163	-10.843	-5.739	58.523	1.00	5.73
	ATOM	1537	CE3	TRP	163	-13.049	-5.616	59.503	1.00	7.68
	ATOM	1538	CD1	TRP	163	-9.538	-6.002	60.317	1.00	7.09
	ATOM	1539	NE1	TRP	163	-9.550	-5.890	58.946	1.00	7.80
25	ATOM	1540	HE1	TRP	163	-8.747	-5.895	58.372	1.00	0.00
	ATOM	1541	CZ2	TRP	163	-11.356	-5.586	57.236	1.00	3.92
	ATOM	1542	CZ3	TRP	163	-13.559	-5.465	58.222	1.00	6.08
	ATOM	1543	CH2	TRP	163	-12.713	-5.453	57.106	1.00	6.60
	ATOM	1544	C	TRP	163	-13.333	-7.236	62.546	1.00	10.74
30	ATOM	1545	O	TRP	163	-14.068	-6.410	63.069	1.00	11.52
	ATOM	1546	N	TYR	164	-13.798	-8.207	61.764	1.00	12.03
	ATOM	1547	H	TYR	164	-13.212	-8.893	61.386	1.00	0.00
	ATOM	1548	CA	TYR	164	-15.225	-8.321	61.471	1.00	11.28
	ATOM	1549	CB	TYR	164	-15.458	-8.736	60.021	1.00	10.37
35	ATOM	1550	CG	TYR	164	-16.922	-8.793	59.634	1.00	8.61
	ATOM	1551	CD1	TYR	164	-17.645	-7.631	59.372	1.00	6.05
	ATOM	1552	CE1	TYR	164	-18.986	-7.687	59.010	1.00	5.19
	ATOM	1553	CD2	TYR	164	-17.583	-10.013	59.523	1.00	8.20
	ATOM	1554	CE2	TYR	164	-18.919	-10.074	59.160	1.00	9.10

	ATOM	1555	CZ	TYR	164	-19.609	-8.913	58.904	1.00	6.35
	ATOM	1556	OH	TYR	164	-20.920	-8.989	58.504	1.00	15.30
	ATOM	1557	HH	TYR	164	-21.280	-8.115	58.337	1.00	0.00
	ATOM	1558	C	TYR	164	-15.910	-9.319	62.406	1.00	14.40
5	ATOM	1559	O	TYR	164	-15.454	-10.456	62.564	1.00	11.39
	ATOM	1560	N	HIS	165	-17.014	-8.887	63.016	1.00	15.72
	ATOM	1561	H	HIS	165	-17.347	-7.989	62.813	1.00	0.00
	ATOM	1562	CA	HIS	165	-17.769	-9.724	63.945	1.00	15.88
	ATOM	1563	CB	HIS	165	-17.824	-9.061	65.328	1.00	14.50
10	ATOM	1564	CG	HIS	165	-16.476	-8.812	65.939	1.00	13.27
	ATOM	1565	CD2	HIS	165	-15.393	-8.142	65.472	1.00	13.68
	ATOM	1566	ND1	HIS	165	-16.117	-9.296	67.181	1.00	13.92
	ATOM	1567	HD1	HIS	165	-16.644	-9.884	67.761	1.00	0.00
	ATOM	1568	CE1	HIS	165	-14.872	-8.937	67.448	1.00	9.42
15	ATOM	1569	NE2	HIS	165	-14.413	-8.240	66.431	1.00	9.18
	ATOM	1570	HE2	HIS	165	-13.496	-7.895	66.349	1.00	0.00
	ATOM	1571	C	HIS	165	-19.170	-9.952	63.382	1.00	18.23
	ATOM	1572	O	HIS	165	-19.962	-9.017	63.273	1.00	19.85
	ATOM	1573	N	SER	166	-19.451	-11.201	63.014	1.00	20.28
20	ATOM	1574	H	SER	166	-18.770	-11.903	63.124	1.00	0.00
	ATOM	1575	CA	SER	166	-20.723	-11.619	62.420	1.00	21.65
	ATOM	1576	CB	SER	166	-20.708	-13.130	62.191	1.00	20.69
	ATOM	1577	OG	SER	166	-19.443	-13.555	61.714	1.00	32.02
	ATOM	1578	HG	SER	166	-19.263	-13.122	60.873	1.00	0.00
25	ATOM	1579	C	SER	166	-21.985	-11.260	63.197	1.00	22.80
	ATOM	1580	O	SER	166	-23.005	-10.924	62.597	1.00	23.80
	ATOM	1581	N	SER	167	-21.944	-11.424	64.515	1.00	24.13
	ATOM	1582	H	SER	167	-21.139	-11.759	64.954	1.00	0.00
	ATOM	1583	CA	SER	167	-23.089	-11.117	65.364	1.00	26.47
30	ATOM	1584	CB	SER	167	-23.831	-12.391	65.775	1.00	26.47
	ATOM	1585	OG	SER	167	-24.476	-12.991	64.664	1.00	33.37
	ATOM	1586	HG	SER	167	-25.120	-13.631	64.981	1.00	0.00
	ATOM	1587	C	SER	167	-22.598	-10.401	66.599	1.00	26.39
	ATOM	1588	O	SER	167	-22.019	-11.016	67.492	1.00	31.31
35	ATOM	1589	N	LEU	168	-22.788	-9.089	66.616	1.00	25.40
	ATOM	1590	H	LEU	168	-23.244	-8.656	65.859	1.00	0.00
	ATOM	1591	CA	LEU	168	-22.378	-8.254	67.731	1.00	21.28
	ATOM	1592	CB	LEU	168	-20.975	-7.692	67.514	1.00	19.91
	ATOM	1593	CG	LEU	168	-19.787	-8.250	68.290	1.00	19.49

	ATOM	1594	CD1	LEU	168	-18.688	-7.208	68.269	1.00	17.54
	ATOM	1595	CD2	LEU	168	-20.165	-8.547	69.717	1.00	20.20
	ATOM	1596	C	LEU	168	-23.338	-7.096	67.799	1.00	20.38
	ATOM	1597	O	LEU	168	-23.574	-6.420	66.797	1.00	23.06
5	ATOM	1598	N	THR	169	-23.935	-6.897	68.961	1.00	18.27
	ATOM	1599	H	THR	169	-23.739	-7.470	69.729	1.00	0.00
	ATOM	1600	CA	THR	169	-24.846	-5.788	69.138	1.00	14.78
	ATOM	1601	CB	THR	169	-25.898	-6.091	70.224	1.00	17.59
	ATOM	1602	OG1	THR	169	-25.244	-6.312	71.482	1.00	16.95
10	ATOM	1603	HG1	THR	169	-25.904	-6.666	72.097	1.00	0.00
	ATOM	1604	CG2	THR	169	-26.709	-7.327	69.854	1.00	18.12
	ATOM	1605	C	THR	169	-23.962	-4.647	69.612	1.00	14.12
	ATOM	1606	O	THR	169	-22.784	-4.853	69.918	1.00	13.47
	ATOM	1607	N	ARG	170	-24.532	-3.453	69.683	1.00	13.49
15	ATOM	1608	H	ARG	170	-25.461	-3.362	69.374	1.00	0.00
	ATOM	1609	CA	ARG	170	-23.819	-2.271	70.142	1.00	12.83
	ATOM	1610	CB	ARG	170	-24.768	-1.075	70.111	1.00	9.01
	ATOM	1611	CG	ARG	170	-24.200	0.203	70.663	1.00	7.72
	ATOM	1612	CD	ARG	170	-25.258	1.271	70.649	1.00	7.48
20	ATOM	1613	NE	ARG	170	-24.693	2.587	70.897	1.00	9.76
	ATOM	1614	HE	ARG	170	-24.435	2.810	71.815	1.00	0.00
	ATOM	1615	CZ	ARG	170	-24.515	3.512	69.962	1.00	9.38
	ATOM	1616	NH1	ARG	170	-23.989	4.681	70.290	1.00	8.60
	ATOM	1617	HH11	ARG	170	-23.732	4.855	71.242	1.00	0.00
25	ATOM	1618	HH12	ARG	170	-23.839	5.384	69.600	1.00	0.00
	ATOM	1619	NH2	ARG	170	-24.872	3.277	68.705	1.00	6.68
	ATOM	1620	HH21	ARG	170	-25.304	2.407	68.477	1.00	0.00
	ATOM	1621	HH22	ARG	170	-24.748	3.982	68.003	1.00	0.00
	ATOM	1622	C	ARG	170	-23.295	-2.478	71.564	1.00	14.22
30	ATOM	1623	O	ARG	170	-22.162	-2.113	71.876	1.00	15.95
	ATOM	1624	N	GLU	171	-24.133	-3.044	72.425	1.00	16.49
	ATOM	1625	H	GLU	171	-25.006	-3.316	72.108	1.00	0.00
	ATOM	1626	CA	GLU	171	-23.764	-3.294	73.815	1.00	18.76
	ATOM	1627	CB	GLU	171	-24.946	-3.879	74.596	1.00	23.85
35	ATOM	1628	CG	GLU	171	-26.031	-2.873	74.999	1.00	33.82
	ATOM	1629	CD	GLU	171	-26.910	-2.398	73.838	1.00	38.04
	ATOM	1630	OE1	GLU	171	-27.491	-1.288	73.952	1.00	36.00
	ATOM	1631	OE2	GLU	171	-27.034	-3.132	72.826	1.00	37.18
	ATOM	1632	C	GLU	171	-22.584	-4.249	73.900	1.00	17.67

	ATOM	1633	O	GLU	171	-21.632	-4.009	74.645	1.00	17.85
	ATOM	1634	N	GLU	172	-22.660	-5.331	73.130	1.00	17.32
	ATOM	1635	H	GLU	172	-23.444	-5.443	72.559	1.00	0.00
	ATOM	1636	CA	GLU	172	-21.606	-6.340	73.090	1.00	15.02
5	ATOM	1637	CB	GLU	172	-22.061	-7.542	72.267	1.00	15.64
	ATOM	1638	CG	GLU	172	-23.194	-8.329	72.899	1.00	19.91
	ATOM	1639	CD	GLU	172	-23.906	-9.255	71.918	1.00	25.18
	ATOM	1640	OE1	GLU	172	-25.002	-9.751	72.253	1.00	30.20
	ATOM	1641	OE2	GLU	172	-23.390	-9.481	70.804	1.00	27.42
10	ATOM	1642	C	GLU	172	-20.315	-5.764	72.519	1.00	14.37
	ATOM	1643	O	GLU	172	-19.221	-6.107	72.970	1.00	15.38
	ATOM	1644	N	ALA	173	-20.443	-4.888	71.527	1.00	12.66
	ATOM	1645	H	ALA	173	-21.328	-4.667	71.181	1.00	0.00
	ATOM	1646	CA	ALA	173	-19.282	-4.250	70.913	1.00	10.27
15	ATOM	1647	CB	ALA	173	-19.709	-3.376	69.747	1.00	9.98
	ATOM	1648	C	ALA	173	-18.551	-3.415	71.953	1.00	9.42
	ATOM	1649	O	ALA	173	-17.339	-3.527	72.102	1.00	10.18
	ATOM	1650	N	GLU	174	-19.295	-2.599	72.694	1.00	11.48
	ATOM	1651	H	GLU	174	-20.266	-2.557	72.540	1.00	0.00
20	ATOM	1652	CA	GLU	174	-18.697	-1.761	73.725	1.00	11.44
	ATOM	1653	CB	GLU	174	-19.727	-0.810	74.322	1.00	10.86
	ATOM	1654	CG	GLU	174	-20.082	0.331	73.398	1.00	13.06
	ATOM	1655	CD	GLU	174	-20.959	1.383	74.050	1.00	15.17
	ATOM	1656	OE1	GLU	174	-20.984	1.474	75.297	1.00	14.77
25	ATOM	1657	OE2	GLU	174	-21.622	2.132	73.306	1.00	15.98
	ATOM	1658	C	GLU	174	-18.061	-2.589	74.824	1.00	11.55
	ATOM	1659	O	GLU	174	-17.005	-2.237	75.345	1.00	15.49
	ATOM	1660	N	ARG	175	-18.707	-3.684	75.194	1.00	13.21
	ATOM	1661	H	ARG	175	-19.572	-3.890	74.766	1.00	0.00
30	ATOM	1662	CA	ARG	175	-18.169	-4.550	76.232	1.00	15.31
	ATOM	1663	CB	ARG	175	-19.136	-5.693	76.514	1.00	16.15
	ATOM	1664	CG	ARG	175	-18.747	-6.564	77.685	1.00	24.24
	ATOM	1665	CD	ARG	175	-19.658	-7.776	77.764	1.00	31.62
	ATOM	1666	NE	ARG	175	-21.073	-7.405	77.758	1.00	38.21
35	ATOM	1667	HE	ARG	175	-21.507	-7.272	76.885	1.00	0.00
	ATOM	1668	CZ	ARG	175	-21.813	-7.241	78.852	1.00	43.81
	ATOM	1669	NH1	ARG	175	-21.276	-7.421	80.056	1.00	42.92
	ATOM	1670	HH11	ARG	175	-20.313	-7.677	80.134	1.00	0.00
	ATOM	1671	HH12	ARG	175	-21.827	-7.290	80.881	1.00	0.00

	ATOM	1672	NH2	ARG	175	-23.087	-6.869	78.741	1.00	45.14
	ATOM	1673	HH21	ARG	175	-23.483	-6.719	77.836	1.00	0.00
	ATOM	1674	HH22	ARG	175	-23.645	-6.731	79.561	1.00	0.00
	ATOM	1675	C	ARG	175	-16.808	-5.102	75.808	1.00	15.70
5	ATOM	1676	O	ARG	175	-15.875	-5.124	76.606	1.00	14.24
	ATOM	1677	N	LYS	176	-16.691	-5.522	74.550	1.00	15.99
	ATOM	1678	H	LYS	176	-17.474	-5.464	73.956	1.00	0.00
	ATOM	1679	CA	LYS	176	-15.432	-6.061	74.031	1.00	18.88
	ATOM	1680	CB	LYS	176	-15.643	-6.727	72.672	1.00	20.03
10	ATOM	1681	CG	LYS	176	-16.324	-8.074	72.733	1.00	24.38
	ATOM	1682	CD	LYS	176	-16.319	-8.737	71.365	1.00	28.28
	ATOM	1683	CE	LYS	176	-16.972	-10.118	71.402	1.00	32.74
	ATOM	1684	NZ	LYS	176	-16.224	-11.112	72.229	1.00	33.50
	ATOM	1685	HZ1	LYS	176	-16.180	-10.765	73.210	1.00	0.00
15	ATOM	1686	HZ2	LYS	176	-15.257	-11.220	71.853	1.00	0.00
	ATOM	1687	HZ3	LYS	176	-16.712	-12.029	72.190	1.00	0.00
	ATOM	1688	C	LYS	176	-14.336	-5.002	73.903	1.00	19.37
	ATOM	1689	O	LYS	176	-13.164	-5.275	74.164	1.00	20.28
	ATOM	1690	N	LEU	177	-14.722	-3.799	73.490	1.00	16.82
20	ATOM	1691	H	LEU	177	-15.661	-3.666	73.244	1.00	0.00
	ATOM	1692	CA	LEU	177	-13.776	-2.704	73.325	1.00	15.13
	ATOM	1693	CB	LEU	177	-14.379	-1.617	72.428	1.00	13.20
	ATOM	1694	CG	LEU	177	-14.633	-2.023	70.973	1.00	11.03
	ATOM	1695	CD1	LEU	177	-15.280	-0.876	70.229	1.00	8.85
25	ATOM	1696	CD2	LEU	177	-13.329	-2.429	70.302	1.00	5.60
	ATOM	1697	C	LEU	177	-13.315	-2.111	74.654	1.00	16.41
	ATOM	1698	O	LEU	177	-12.157	-1.730	74.800	1.00	16.11
	ATOM	1699	N	TYR	178	-14.227	-2.014	75.615	1.00	17.85
	ATOM	1700	H	TYR	178	-15.136	-2.325	75.444	1.00	0.00
30	ATOM	1701	CA	TYR	178	-13.900	-1.471	76.929	1.00	19.30
	ATOM	1702	CB	TYR	178	-15.174	-1.068	77.676	1.00	15.30
	ATOM	1703	CG	TYR	178	-15.706	0.301	77.313	1.00	11.87
	ATOM	1704	CD1	TYR	178	-14.866	1.413	77.301	1.00	9.08
	ATOM	1705	CE1	TYR	178	-15.356	2.681	77.014	1.00	8.80
35	ATOM	1706	CD2	TYR	178	-17.051	0.493	77.023	1.00	8.22
	ATOM	1707	CE2	TYR	178	-17.549	1.756	76.736	1.00	8.10
	ATOM	1708	CZ	TYR	178	-16.696	2.846	76.734	1.00	10.05
	ATOM	1709	OH	TYR	178	-17.183	4.110	76.465	1.00	12.49
	ATOM	1710	HH	TYR	178	-18.142	4.016	76.455	1.00	0.00

	ATOM	1711	C	TYR	178	-13.135	-2.494	77.752	1.00	22.26
	ATOM	1712	O	TYR	178	-12.287	-2.148	78.572	1.00	22.67
	ATOM	1713	N	SER	179	-13.432	-3.764	77.514	1.00	28.96
	ATOM	1714	H	SER	179	-14.082	-4.002	76.825	1.00	0.00
5	ATOM	1715	CA	SER	179	-12.791	-4.850	78.237	1.00	32.67
	ATOM	1716	CB	SER	179	-13.775	-6.013	78.416	1.00	34.27
	ATOM	1717	OG	SER	179	-14.956	-5.590	79.095	1.00	32.95
	ATOM	1718	HG	SER	179	-15.462	-5.097	78.445	1.00	0.00
	ATOM	1719	C	SER	179	-11.518	-5.320	77.544	1.00	34.73
10	ATOM	1720	O	SER	179	-11.467	-6.416	76.994	1.00	37.10
	ATOM	1721	N	GLY	180	-10.490	-4.483	77.578	1.00	37.24
	ATOM	1722	H	GLY	180	-10.577	-3.618	78.040	1.00	0.00
	ATOM	1723	CA	GLY	180	-9.230	-4.834	76.951	1.00	39.63
	ATOM	1724	C	GLY	180	-8.163	-3.809	77.266	1.00	41.09
15	ATOM	1725	O	GLY	180	-8.217	-3.151	78.305	1.00	41.30
	ATOM	1726	N	ALA	181	-7.201	-3.659	76.361	1.00	43.10
	ATOM	1727	H	ALA	181	-7.216	-4.226	75.564	1.00	0.00
	ATOM	1728	CA	ALA	181	-6.116	-2.699	76.541	1.00	43.62
	ATOM	1729	CB	ALA	181	-5.003	-2.975	75.547	1.00	44.37
20	ATOM	1730	C	ALA	181	-6.608	-1.261	76.393	1.00	44.60
	ATOM	1731	O	ALA	181	-5.962	-0.327	76.865	1.00	47.43
	ATOM	1732	N	GLN	182	-7.749	-1.091	75.731	1.00	42.79
	ATOM	1733	H	GLN	182	-8.217	-1.875	75.390	1.00	0.00
	ATOM	1734	CA	GLN	182	-8.339	0.229	75.516	1.00	41.06
25	ATOM	1735	CB	GLN	182	-8.819	0.840	76.837	1.00	40.78
	ATOM	1736	CG	GLN	182	-10.005	0.113	77.453	1.00	42.40
	ATOM	1737	CD	GLN	182	-10.574	0.836	78.661	1.00	45.06
	ATOM	1738	OE1	GLN	182	-10.583	2.069	78.717	1.00	45.31
	ATOM	1739	NE2	GLN	182	-11.067	0.075	79.626	1.00	44.73
30	ATOM	1740	HE21	GLN	182	-11.050	-0.897	79.502	1.00	0.00
	ATOM	1741	HE22	GLN	182	-11.427	0.496	80.437	1.00	0.00
	ATOM	1742	C	GLN	182	-7.405	1.189	74.784	1.00	39.41
	ATOM	1743	O	GLN	182	-7.449	2.406	74.994	1.00	39.06
	ATOM	1744	N	THR	183	-6.580	0.625	73.908	1.00	38.44
35	ATOM	1745	H	THR	183	-6.587	-0.340	73.784	1.00	0.00
	ATOM	1746	CA	THR	183	-5.632	1.390	73.109	1.00	35.60
	ATOM	1747	CB	THR	183	-4.702	0.455	72.333	1.00	37.11
	ATOM	1748	OG1	THR	183	-4.298	-0.628	73.180	1.00	40.31
	ATOM	1749	HG1	THR	183	-3.583	-1.085	72.722	1.00	0.00

	ATOM	1750	CG2	THR	183	-3.477	1.212	71.842	1.00	38.58
	ATOM	1751	C	THR	183	-6.398	2.212	72.081	1.00	32.82
	ATOM	1752	O	THR	183	-7.365	1.725	71.485	1.00	30.53
	ATOM	1753	N	ASP	184	-5.957	3.444	71.856	1.00	29.67
5	ATOM	1754	H	ASP	184	-5.161	3.761	72.327	1.00	0.00
	ATOM	1755	CA	ASP	184	-6.616	4.312	70.889	1.00	27.05
	ATOM	1756	CB	ASP	184	-5.947	5.693	70.862	1.00	28.47
	ATOM	1757	CG	ASP	184	-6.205	6.506	72.126	1.00	30.50
	ATOM	1758	OD1	ASP	184	-5.410	7.432	72.391	1.00	32.80
10	ATOM	1759	OD2	ASP	184	-7.198	6.244	72.844	1.00	29.45
	ATOM	1760	C	ASP	184	-6.582	3.679	69.495	1.00	24.36
	ATOM	1761	O	ASP	184	-5.569	3.109	69.089	1.00	21.86
	ATOM	1762	N	GLY	185	-7.707	3.752	68.790	1.00	20.06
	ATOM	1763	H	GLY	185	-8.508	4.173	69.171	1.00	0.00
15	ATOM	1764	CA	GLY	185	-7.784	3.190	67.458	1.00	16.45
	ATOM	1765	C	GLY	185	-8.218	1.737	67.404	1.00	13.20
	ATOM	1766	O	GLY	185	-8.296	1.173	66.318	1.00	14.03
	ATOM	1767	N	LYS	186	-8.438	1.111	68.557	1.00	13.12
	ATOM	1768	H	LYS	186	-8.274	1.583	69.398	1.00	0.00
20	ATOM	1769	CA	LYS	186	-8.888	-0.282	68.606	1.00	13.63
	ATOM	1770	CB	LYS	186	-8.986	-0.748	70.057	1.00	17.81
	ATOM	1771	CG	LYS	186	-8.738	-2.226	70.287	1.00	22.20
	ATOM	1772	CD	LYS	186	-7.246	-2.526	70.257	1.00	30.53
	ATOM	1773	CE	LYS	186	-6.949	-3.956	70.685	1.00	34.36
25	ATOM	1774	NZ	LYS	186	-5.493	-4.283	70.606	1.00	33.77
	ATOM	1775	HZ1	LYS	186	-4.967	-3.644	71.232	1.00	0.00
	ATOM	1776	HZ2	LYS	186	-5.150	-4.182	69.632	1.00	0.00
	ATOM	1777	HZ3	LYS	186	-5.356	-5.264	70.919	1.00	0.00
	ATOM	1778	C	LYS	186	-10.282	-0.245	67.980	1.00	10.77
30	ATOM	1779	O	LYS	186	-11.107	0.573	68.376	1.00	10.89
	ATOM	1780	N	PHE	187	-10.563	-1.139	67.038	1.00	9.58
	ATOM	1781	H	PHE	187	-9.906	-1.827	66.789	1.00	0.00
	ATOM	1782	CA	PHE	187	-11.849	-1.114	66.354	1.00	5.69
	ATOM	1783	CB	PHE	187	-11.718	-0.276	65.066	1.00	6.05
35	ATOM	1784	CG	PHE	187	-10.985	-0.991	63.949	1.00	6.66
	ATOM	1785	CD1	PHE	187	-11.684	-1.540	62.876	1.00	5.77
	ATOM	1786	CD2	PHE	187	-9.600	-1.149	63.991	1.00	7.01
	ATOM	1787	CE1	PHE	187	-11.022	-2.240	61.868	1.00	6.32
	ATOM	1788	CE2	PHE	187	-8.926	-1.853	62.978	1.00	6.92

	ATOM	1789	CZ	PHE	187	-9.640	-2.397	61.919	1.00	5.13
	ATOM	1790	C	PHE	187	-12.368	-2.485	65.962	1.00	6.09
	ATOM	1791	O	PHE	187	-11.659	-3.482	66.040	1.00	6.46
	ATOM	1792	N	LEU	188	-13.612	-2.506	65.502	1.00	4.37
5	ATOM	1793	H	LEU	188	-14.139	-1.682	65.510	1.00	0.00
	ATOM	1794	CA	LEU	188	-14.253	-3.711	65.018	1.00	4.97
	ATOM	1795	CB	LEU	188	-14.849	-4.529	66.164	1.00	8.12
	ATOM	1796	CG	LEU	188	-15.937	-3.971	67.079	1.00	6.99
	ATOM	1797	CD1	LEU	188	-17.293	-3.940	66.382	1.00	4.98
10	ATOM	1798	CD2	LEU	188	-16.005	-4.869	68.296	1.00	9.58
	ATOM	1799	C	LEU	188	-15.328	-3.269	64.044	1.00	4.81
	ATOM	1800	O	LEU	188	-15.705	-2.099	64.021	1.00	7.29
	ATOM	1801	N	LEU	189	-15.776	-4.185	63.201	1.00	4.31
	ATOM	1802	H	LEU	189	-15.415	-5.099	63.217	1.00	0.00
15	ATOM	1803	CA	LEU	189	-16.816	-3.887	62.234	1.00	6.28
	ATOM	1804	CB	LEU	189	-16.289	-3.999	60.806	1.00	6.37
	ATOM	1805	CG	LEU	189	-17.305	-3.588	59.747	1.00	9.47
	ATOM	1806	CD1	LEU	189	-17.422	-2.078	59.738	1.00	13.86
	ATOM	1807	CD2	LEU	189	-16.874	-4.083	58.383	1.00	14.76
20	ATOM	1808	C	LEU	189	-17.892	-4.921	62.468	1.00	6.49
	ATOM	1809	O	LEU	189	-17.590	-6.097	62.647	1.00	7.98
	ATOM	1810	N	ARG	190	-19.146	-4.492	62.457	1.00	7.83
	ATOM	1811	H	ARG	190	-19.341	-3.547	62.290	1.00	0.00
	ATOM	1812	CA	ARG	190	-20.249	-5.407	62.706	1.00	8.00
25	ATOM	1813	CB	ARG	190	-20.660	-5.307	64.181	1.00	8.07
	ATOM	1814	CG	ARG	190	-21.012	-3.879	64.610	1.00	5.07
	ATOM	1815	CD	ARG	190	-21.372	-3.771	66.080	1.00	9.21
	ATOM	1816	NE	ARG	190	-21.369	-2.379	66.535	1.00	9.70
	ATOM	1817	HE	ARG	190	-20.510	-2.002	66.808	1.00	0.00
30	ATOM	1818	CZ	ARG	190	-22.446	-1.603	66.618	1.00	7.61
	ATOM	1819	NH1	ARG	190	-23.644	-2.069	66.288	1.00	9.52
	ATOM	1820	HH11	ARG	190	-23.756	-3.016	65.981	1.00	0.00
	ATOM	1821	HH12	ARG	190	-24.437	-1.466	66.366	1.00	0.00
	ATOM	1822	NH2	ARG	190	-22.314	-0.342	66.995	1.00	5.65
35	ATOM	1823	HH21	ARG	190	-21.402	0.008	67.211	1.00	0.00
	ATOM	1824	HH22	ARG	190	-23.111	0.252	67.069	1.00	0.00
	ATOM	1825	C	ARG	190	-21.444	-5.057	61.847	1.00	10.51
	ATOM	1826	O	ARG	190	-21.683	-3.880	61.565	1.00	14.83
	ATOM	1827	N	PRO	191	-22.176	-6.071	61.361	1.00	10.83

	ATOM	1828	CD	PRO	191	-21.942	-7.523	61.465	1.00	10.41
	ATOM	1829	CA	PRO	191	-23.352	-5.787	60.540	1.00	10.84
	ATOM	1830	CB	PRO	191	-23.690	-7.156	59.946	1.00	9.30
	ATOM	1831	CG	PRO	191	-23.267	-8.095	61.017	1.00	9.83
5	ATOM	1832	C	PRO	191	-24.462	-5.298	61.471	1.00	12.64
	ATOM	1833	O	PRO	191	-24.466	-5.630	62.659	1.00	15.28
	ATOM	1834	N	ARG	192	-25.363	-4.469	60.963	1.00	12.45
	ATOM	1835	H	ARG	192	-25.336	-4.180	60.025	1.00	0.00
	ATOM	1836	CA	ARG	192	-26.454	-3.983	61.787	1.00	12.10
10	ATOM	1837	CB	ARG	192	-26.689	-2.491	61.575	1.00	9.12
	ATOM	1838	CG	ARG	192	-25.592	-1.606	62.105	1.00	2.40
	ATOM	1839	CD	ARG	192	-25.878	-0.148	61.810	1.00	7.40
	ATOM	1840	NE	ARG	192	-27.001	0.383	62.583	1.00	8.66
	ATOM	1841	HE	ARG	192	-26.904	0.465	63.553	1.00	0.00
15	ATOM	1842	CZ	ARG	192	-28.172	0.743	62.064	1.00	8.48
	ATOM	1843	NH1	ARG	192	-28.390	0.628	60.764	1.00	11.77
	ATOM	1844	HH11	ARG	192	-27.658	0.282	60.181	1.00	0.00
	ATOM	1845	HH12	ARG	192	-29.261	0.900	60.355	1.00	0.00
	ATOM	1846	NH2	ARG	192	-29.121	1.243	62.841	1.00	11.80
20	ATOM	1847	HH21	ARG	192	-28.968	1.357	63.822	1.00	0.00
	ATOM	1848	HH22	ARG	192	-29.999	1.507	62.438	1.00	0.00
	ATOM	1849	C	ARG	192	-27.708	-4.761	61.449	1.00	16.67
	ATOM	1850	O	ARG	192	-27.713	-5.581	60.530	1.00	16.54
	ATOM	1851	N	LYS	193	-28.765	-4.497	62.207	1.00	24.12
25	ATOM	1852	H	LYS	193	-28.664	-3.846	62.939	1.00	0.00
	ATOM	1853	CA	LYS	193	-30.052	-5.154	62.021	1.00	27.69
	ATOM	1854	CB	LYS	193	-31.054	-4.605	63.040	1.00	30.58
	ATOM	1855	CG	LYS	193	-32.442	-5.207	62.954	1.00	36.83
	ATOM	1856	CD	LYS	193	-33.390	-4.538	63.950	1.00	42.21
30	ATOM	1857	CE	LYS	193	-34.851	-4.902	63.677	1.00	43.76
	ATOM	1858	NZ	LYS	193	-35.100	-6.373	63.679	1.00	45.07
	ATOM	1859	HZ1	LYS	193	-34.800	-6.768	64.593	1.00	0.00
	ATOM	1860	HZ2	LYS	193	-34.562	-6.822	62.914	1.00	0.00
	ATOM	1861	HZ3	LYS	193	-36.117	-6.545	63.544	1.00	0.00
35	ATOM	1862	C	LYS	193	-30.595	-5.004	60.595	1.00	29.29
	ATOM	1863	O	LYS	193	-31.078	-5.970	60.009	1.00	30.78
	ATOM	1864	N	GLU	194	-30.505	-3.803	60.027	1.00	30.08
	ATOM	1865	H	GLU	194	-30.052	-3.073	60.494	1.00	0.00
	ATOM	1866	CA	GLU	194	-31.010	-3.580	58.672	1.00	29.65

	ATOM	1867	CB	GLU	194	-31.443	-2.124	58.468	1.00	31.51
	ATOM	1868	CG	GLU	194	-32.478	-1.620	59.468	1.00	34.14
	ATOM	1869	CD	GLU	194	-31.843	-1.000	60.701	1.00	39.15
	ATOM	1870	OE1	GLU	194	-32.144	-1.447	61.828	1.00	43.02
5	ATOM	1871	OE2	GLU	194	-31.040	-0.057	60.545	1.00	42.87
	ATOM	1872	C	GLU	194	-29.996	-3.978	57.608	1.00	29.35
	ATOM	1873	O	GLU	194	-28.815	-3.656	57.708	1.00	30.02
	ATOM	1874	N	GLN	195	-30.475	-4.676	56.585	1.00	27.79
	ATOM	1875	H	GLN	195	-31.430	-4.874	56.579	1.00	0.00
10	ATOM	1876	CA	GLN	195	-29.638	-5.143	55.486	1.00	26.98
	ATOM	1877	CB	GLN	195	-30.495	-5.896	54.468	1.00	32.16
	ATOM	1878	CG	GLN	195	-31.179	-7.137	55.007	1.00	38.27
	ATOM	1879	CD	GLN	195	-30.242	-8.321	55.098	1.00	42.30
	ATOM	1880	OE1	GLN	195	-29.244	-8.286	55.816	1.00	46.88
15	ATOM	1881	NE2	GLN	195	-30.550	-9.375	54.356	1.00	43.75
	ATOM	1882	HE21	GLN	195	-31.346	-9.348	53.792	1.00	0.00
	ATOM	1883	HE22	GLN	195	-29.951	-10.143	54.423	1.00	0.00
	ATOM	1884	C	GLN	195	-28.949	-3.987	54.779	1.00	23.15
	ATOM	1885	O	GLN	195	-29.574	-2.973	54.488	1.00	24.44
20	ATOM	1886	N	GLY	196	-27.661	-4.142	54.502	1.00	20.21
	ATOM	1887	H	GLY	196	-27.192	-4.960	54.770	1.00	0.00
	ATOM	1888	CA	GLY	196	-26.934	-3.096	53.811	1.00	17.86
	ATOM	1889	C	GLY	196	-26.347	-2.009	54.687	1.00	17.20
	ATOM	1890	O	GLY	196	-25.769	-1.050	54.169	1.00	15.58
25	ATOM	1891	N	THR	197	-26.517	-2.130	56.003	1.00	16.43
	ATOM	1892	H	THR	197	-27.003	-2.893	56.375	1.00	0.00
	ATOM	1893	CA	THR	197	-25.966	-1.160	56.944	1.00	12.41
	ATOM	1894	CB	THR	197	-27.056	-0.415	57.740	1.00	12.16
	ATOM	1895	OG1	THR	197	-27.907	-1.361	58.392	1.00	12.64
30	ATOM	1896	HG1	THR	197	-28.275	-1.934	57.715	1.00	0.00
	ATOM	1897	CG2	THR	197	-27.883	0.478	56.826	1.00	7.90
	ATOM	1898	C	THR	197	-25.050	-1.897	57.912	1.00	12.59
	ATOM	1899	O	THR	197	-25.333	-3.033	58.312	1.00	13.67
	ATOM	1900	N	TYR	198	-23.933	-1.259	58.244	1.00	8.91
35	ATOM	1901	H	TYR	198	-23.787	-0.345	57.907	1.00	0.00
	ATOM	1902	CA	TYR	198	-22.936	-1.814	59.148	1.00	8.91
	ATOM	1903	CB	TYR	198	-21.686	-2.239	58.363	1.00	6.61
	ATOM	1904	CG	TYR	198	-21.941	-3.345	57.363	1.00	9.50
	ATOM	1905	CD1	TYR	198	-22.509	-3.072	56.118	1.00	6.46

	ATOM	1906	CE1	TYR	198	-22.777	-4.092	55.212	1.00	9.83
	ATOM	1907	CD2	TYR	198	-21.643	-4.671	57.675	1.00	9.33
	ATOM	1908	CE2	TYR	198	-21.905	-5.693	56.778	1.00	12.76
	ATOM	1909	CZ	TYR	198	-22.469	-5.403	55.549	1.00	13.23
5	ATOM	1910	OH	TYR	198	-22.692	-6.430	54.649	1.00	15.25
	ATOM	1911	HH	TYR	198	-23.165	-6.078	53.883	1.00	0.00
	ATOM	1912	C	TYR	198	-22.560	-0.696	60.091	1.00	8.51
	ATOM	1913	O	TYR	198	-23.001	0.436	59.912	1.00	11.67
	ATOM	1914	N	ALA	199	-21.748	-1.001	61.091	1.00	8.59
10	ATOM	1915	H	ALA	199	-21.423	-1.916	61.229	1.00	0.00
	ATOM	1916	CA	ALA	199	-21.306	0.025	62.017	1.00	6.98
	ATOM	1917	CB	ALA	199	-22.149	0.012	63.283	1.00	7.55
	ATOM	1918	C	ALA	199	-19.851	-0.214	62.348	1.00	8.45
	ATOM	1919	O	ALA	199	-19.422	-1.361	62.501	1.00	9.19
15	ATOM	1920	N	LEU	200	-19.084	0.869	62.380	1.00	7.78
	ATOM	1921	H	LEU	200	-19.476	1.742	62.171	1.00	0.00
	ATOM	1922	CA	LEU	200	-17.674	0.821	62.715	1.00	7.79
	ATOM	1923	CB	LEU	200	-16.893	1.746	61.784	1.00	9.17
	ATOM	1924	CG	LEU	200	-15.369	1.757	61.924	1.00	15.15
20	ATOM	1925	CD1	LEU	200	-14.783	0.386	61.569	1.00	12.28
	ATOM	1926	CD2	LEU	200	-14.793	2.844	61.012	1.00	13.36
	ATOM	1927	C	LEU	200	-17.571	1.313	64.158	1.00	9.38
	ATOM	1928	O	LEU	200	-17.970	2.433	64.461	1.00	13.05
	ATOM	1929	N	SER	201	-17.087	0.463	65.057	1.00	10.24
25	ATOM	1930	H	SER	201	-16.753	-0.412	64.768	1.00	0.00
	ATOM	1931	CA	SER	201	-16.961	0.824	66.466	1.00	8.31
	ATOM	1932	CB	SER	201	-17.707	-0.196	67.339	1.00	6.89
	ATOM	1933	OG	SER	201	-19.077	-0.311	66.977	1.00	7.26
	ATOM	1934	HG	SER	201	-19.090	-0.707	66.093	1.00	0.00
30	ATOM	1935	C	SER	201	-15.491	0.869	66.862	1.00	9.36
	ATOM	1936	O	SER	201	-14.765	-0.104	66.653	1.00	9.48
	ATOM	1937	N	LEU	202	-15.051	1.984	67.439	1.00	10.31
	ATOM	1938	H	LEU	202	-15.662	2.736	67.609	1.00	0.00
	ATOM	1939	CA	LEU	202	-13.657	2.124	67.853	1.00	11.15
35	ATOM	1940	CB	LEU	202	-12.835	2.838	66.771	1.00	11.80
	ATOM	1941	CG	LEU	202	-12.959	4.352	66.596	1.00	12.43
	ATOM	1942	CD1	LEU	202	-11.634	5.027	66.905	1.00	15.63
	ATOM	1943	CD2	LEU	202	-13.371	4.665	65.176	1.00	18.37
	ATOM	1944	C	LEU	202	-13.534	2.893	69.156	1.00	14.24

	ATOM	1945	O	LEU	202	-14.446	3.617	69.546	1.00	12.46
	ATOM	1946	N	ILE	203	-12.399	2.736	69.825	1.00	17.13
	ATOM	1947	H	ILE	203	-11.707	2.154	69.453	1.00	0.00
	ATOM	1948	CA	ILE	203	-12.162	3.433	71.081	1.00	18.71
5	ATOM	1949	CB	ILE	203	-11.490	2.540	72.137	1.00	19.35
	ATOM	1950	CG2	ILE	203	-11.866	3.011	73.529	1.00	21.06
	ATOM	1951	CG1	ILE	203	-11.887	1.084	71.957	1.00	23.07
	ATOM	1952	CD	ILE	203	-10.981	0.139	72.713	1.00	26.33
	ATOM	1953	C	ILE	203	-11.195	4.580	70.853	1.00	19.13
10	ATOM	1954	O	ILE	203	-10.265	4.481	70.046	1.00	20.24
	ATOM	1955	N	TYR	204	-11.419	5.667	71.571	1.00	19.51
	ATOM	1956	H	TYR	204	-12.205	5.723	72.147	1.00	0.00
	ATOM	1957	CA	TYR	204	-10.544	6.818	71.520	1.00	20.06
	ATOM	1958	CB	TYR	204	-10.831	7.714	70.324	1.00	21.97
15	ATOM	1959	CG	TYR	204	-9.864	8.866	70.276	1.00	23.47
	ATOM	1960	CD1	TYR	204	-8.493	8.637	70.173	1.00	24.19
	ATOM	1961	CE1	TYR	204	-7.590	9.685	70.211	1.00	26.94
	ATOM	1962	CD2	TYR	204	-10.307	10.177	70.411	1.00	24.45
	ATOM	1963	CE2	TYR	204	-9.410	11.232	70.449	1.00	26.76
20	ATOM	1964	CZ	TYR	204	-8.056	10.977	70.354	1.00	28.21
	ATOM	1965	OH	TYR	204	-7.160	12.014	70.424	1.00	37.45
	ATOM	1966	HH	TYR	204	-7.642	12.839	70.522	1.00	0.00
	ATOM	1967	C	TYR	204	-10.724	7.594	72.814	1.00	20.33
	ATOM	1968	O	TYR	204	-11.827	8.055	73.125	1.00	18.87
25	ATOM	1969	N	GLY	205	-9.643	7.695	73.584	1.00	21.84
	ATOM	1970	H	GLY	205	-8.815	7.295	73.279	1.00	0.00
	ATOM	1971	CA	GLY	205	-9.684	8.394	74.858	1.00	20.17
	ATOM	1972	C	GLY	205	-10.621	7.710	75.837	1.00	19.37
	ATOM	1973	O	GLY	205	-11.482	8.360	76.424	1.00	21.75
30	ATOM	1974	N	LYS	206	-10.494	6.390	75.963	1.00	18.95
	ATOM	1975	H	LYS	206	-9.814	5.924	75.440	1.00	0.00
	ATOM	1976	CA	LYS	206	-11.330	5.597	76.866	1.00	21.57
	ATOM	1977	CB	LYS	206	-11.065	5.982	78.323	1.00	23.25
	ATOM	1978	CG	LYS	206	-9.920	5.239	78.982	1.00	27.37
35	ATOM	1979	CD	LYS	206	-9.687	5.772	80.394	1.00	33.80
	ATOM	1980	CE	LYS	206	-9.061	4.730	81.315	1.00	35.90
	ATOM	1981	NZ	LYS	206	-10.000	3.606	81.620	1.00	37.25
	ATOM	1982	HZ1	LYS	206	-10.264	3.129	80.733	1.00	0.00
	ATOM	1983	HZ2	LYS	206	-10.854	3.986	82.078	1.00	0.00

	ATOM	1984	HZ3	LYS	206	-9.536	2.926	82.259	1.00	0.00
	ATOM	1985	C	LYS	206	-12.829	5.688	76.577	1.00	21.03
	ATOM	1986	O	LYS	206	-13.649	5.298	77.403	1.00	22.71
	ATOM	1987	N	THR	207	-13.185	6.174	75.396	1.00	20.66
5	ATOM	1988	H	THR	207	-12.532	6.456	74.735	1.00	0.00
	ATOM	1989	CA	THR	207	-14.582	6.297	75.020	1.00	20.40
	ATOM	1990	CB	THR	207	-14.992	7.782	74.907	1.00	23.55
	ATOM	1991	OG1	THR	207	-14.482	8.507	76.033	1.00	25.33
	ATOM	1992	HG1	THR	207	-13.533	8.667	75.914	1.00	0.00
10	ATOM	1993	CG2	THR	207	-16.507	7.919	74.890	1.00	24.82
	ATOM	1994	C	THR	207	-14.777	5.589	73.679	1.00	19.07
	ATOM	1995	O	THR	207	-13.893	5.630	72.824	1.00	20.35
	ATOM	1996	N	VAL	208	-15.906	4.900	73.531	1.00	16.81
	ATOM	1997	H	VAL	208	-16.535	4.881	74.280	1.00	0.00
15	ATOM	1998	CA	VAL	208	-16.240	4.156	72.317	1.00	15.40
	ATOM	1999	CB	VAL	208	-16.952	2.803	72.665	1.00	12.63
	ATOM	2000	CG1	VAL	208	-17.532	2.159	71.422	1.00	16.18
	ATOM	2001	CG2	VAL	208	-15.972	1.841	73.316	1.00	8.54
	ATOM	2002	C	VAL	208	-17.115	4.965	71.355	1.00	15.91
20	ATOM	2003	O	VAL	208	-18.159	5.483	71.748	1.00	16.07
	ATOM	2004	N	TYR	209	-16.668	5.061	70.100	1.00	17.15
	ATOM	2005	H	TYR	209	-15.820	4.658	69.884	1.00	0.00
	ATOM	2006	CA	TYR	209	-17.366	5.775	69.026	1.00	13.45
	ATOM	2007	CB	TYR	209	-16.393	6.701	68.298	1.00	12.87
25	ATOM	2008	CG	TYR	209	-15.821	7.795	69.153	1.00	12.70
	ATOM	2009	CD1	TYR	209	-16.246	9.107	69.005	1.00	14.59
	ATOM	2010	CE1	TYR	209	-15.721	10.124	69.786	1.00	17.80
	ATOM	2011	CD2	TYR	209	-14.851	7.523	70.108	1.00	12.27
	ATOM	2012	CE2	TYR	209	-14.322	8.531	70.896	1.00	15.57
30	ATOM	2013	CZ	TYR	209	-14.760	9.830	70.732	1.00	16.21
	ATOM	2014	OH	TYR	209	-14.250	10.837	71.519	1.00	16.78
	ATOM	2015	HH	TYR	209	-14.677	11.671	71.296	1.00	0.00
	ATOM	2016	C	TYR	209	-17.956	4.790	68.014	1.00	11.19
	ATOM	2017	O	TYR	209	-17.350	3.770	67.706	1.00	12.29
35	ATOM	2018	N	HIS	210	-19.143	5.096	67.505	1.00	10.27
	ATOM	2019	H	HIS	210	-19.587	5.914	67.804	1.00	0.00
	ATOM	2020	CA	HIS	210	-19.811	4.244	66.525	1.00	9.28
	ATOM	2021	CB	HIS	210	-21.123	3.697	67.085	1.00	11.42
	ATOM	2022	CG	HIS	210	-20.981	2.980	68.390	1.00	13.02

	ATOM	2023	CD2	HIS	210	-21.058	3.429	69.663	1.00	12.81
	ATOM	2024	ND1	HIS	210	-20.751	1.624	68.474	1.00	12.75
	ATOM	2025	HD1	HIS	210	-20.594	1.000	67.722	1.00	0.00
	ATOM	2026	CE1	HIS	210	-20.696	1.268	69.744	1.00	13.87
5	ATOM	2027	NE2	HIS	210	-20.878	2.345	70.485	1.00	13.61
	ATOM	2028	HE2	HIS	210	-20.870	2.365	71.458	1.00	0.00
	ATOM	2029	C	HIS	210	-20.143	5.074	65.301	1.00	9.07
	ATOM	2030	O	HIS	210	-20.690	6.165	65.430	1.00	11.99
	ATOM	2031	N	TYR	211	-19.839	4.550	64.119	1.00	9.30
10	ATOM	2032	H	TYR	211	-19.408	3.671	64.065	1.00	0.00
	ATOM	2033	CA	TYR	211	-20.115	5.239	62.860	1.00	8.50
	ATOM	2034	CB	TYR	211	-18.810	5.602	62.136	1.00	7.82
	ATOM	2035	CG	TYR	211	-17.960	6.618	62.866	1.00	9.31
	ATOM	2036	CD1	TYR	211	-17.064	6.224	63.862	1.00	10.88
15	ATOM	2037	CE1	TYR	211	-16.270	7.154	64.531	1.00	9.13
	ATOM	2038	CD2	TYR	211	-18.043	7.973	62.559	1.00	10.28
	ATOM	2039	CE2	TYR	211	-17.254	8.911	63.223	1.00	9.76
	ATOM	2040	CZ	TYR	211	-16.371	8.492	64.205	1.00	9.78
	ATOM	2041	OH	TYR	211	-15.579	9.405	64.857	1.00	11.29
20	ATOM	2042	HH	TYR	211	-15.854	10.307	64.614	1.00	0.00
	ATOM	2043	C	TYR	211	-20.958	4.331	61.981	1.00	6.82
	ATOM	2044	O	TYR	211	-20.728	3.124	61.917	1.00	8.26
	ATOM	2045	N	LEU	212	-21.949	4.917	61.324	1.00	6.71
	ATOM	2046	H	LEU	212	-22.062	5.893	61.376	1.00	0.00
25	ATOM	2047	CA	LEU	212	-22.852	4.185	60.451	1.00	5.46
	ATOM	2048	CB	LEU	212	-24.174	4.959	60.360	1.00	7.18
	ATOM	2049	CG	LEU	212	-25.494	4.395	59.818	1.00	9.03
	ATOM	2050	CD1	LEU	212	-25.835	5.015	58.480	1.00	12.52
	ATOM	2051	CD2	LEU	212	-25.475	2.889	59.756	1.00	11.67
30	ATOM	2052	C	LEU	212	-22.226	4.035	59.065	1.00	6.62
	ATOM	2053	O	LEU	212	-21.636	4.975	58.535	1.00	5.44
	ATOM	2054	N	ILE	213	-22.275	2.827	58.521	1.00	7.03
	ATOM	2055	H	ILE	213	-22.665	2.078	59.020	1.00	0.00
	ATOM	2056	CA	ILE	213	-21.757	2.583	57.187	1.00	6.11
35	ATOM	2057	CB	ILE	213	-20.691	1.477	57.174	1.00	8.10
	ATOM	2058	CG2	ILE	213	-20.328	1.111	55.733	1.00	8.26
	ATOM	2059	CG1	ILE	213	-19.446	1.940	57.935	1.00	7.79
	ATOM	2060	CD	ILE	213	-18.405	0.858	58.106	1.00	4.59
	ATOM	2061	C	ILE	213	-22.972	2.142	56.384	1.00	7.52

	ATOM	2062	O	ILE	213	-23.708	1.254	56.806	1.00	7.66
	ATOM	2063	N	SER	214	-23.212	2.781	55.250	1.00	8.29
	ATOM	2064	H	SER	214	-22.616	3.483	54.920	1.00	0.00
	ATOM	2065	CA	SER	214	-24.365	2.429	54.442	1.00	11.71
5	ATOM	2066	CB	SER	214	-25.403	3.550	54.517	1.00	13.40
	ATOM	2067	OG	SER	214	-26.664	3.122	54.045	1.00	21.53
	ATOM	2068	HG	SER	214	-27.246	2.924	54.794	1.00	0.00
	ATOM	2069	C	SER	214	-23.944	2.183	53.000	1.00	13.39
	ATOM	2070	O	SER	214	-22.868	2.608	52.574	1.00	14.33
10	ATOM	2071	N	GLN	215	-24.773	1.454	52.266	1.00	16.85
	ATOM	2072	H	GLN	215	-25.622	1.144	52.659	1.00	0.00
	ATOM	2073	CA	GLN	215	-24.501	1.145	50.870	1.00	21.53
	ATOM	2074	CB	GLN	215	-24.656	-0.356	50.632	1.00	21.76
	ATOM	2075	CG	GLN	215	-24.198	-0.815	49.265	1.00	25.99
15	ATOM	2076	CD	GLN	215	-24.267	-2.320	49.102	1.00	27.71
	ATOM	2077	OE1	GLN	215	-24.990	-3.002	49.825	1.00	31.50
	ATOM	2078	NE2	GLN	215	-23.500	-2.848	48.160	1.00	26.57
	ATOM	2079	HE21	GLN	215	-22.916	-2.272	47.626	1.00	0.00
	ATOM	2080	HE22	GLN	215	-23.571	-3.817	48.059	1.00	0.00
20	ATOM	2081	C	GLN	215	-25.496	1.919	50.014	1.00	23.57
	ATOM	2082	O	GLN	215	-26.702	1.807	50.218	1.00	26.27
	ATOM	2083	N	ASP	216	-24.997	2.742	49.096	1.00	24.50
	ATOM	2084	H	ASP	216	-24.024	2.829	49.029	1.00	0.00
	ATOM	2085	CA	ASP	216	-25.878	3.523	48.239	1.00	25.05
25	ATOM	2086	CB	ASP	216	-25.195	4.820	47.769	1.00	24.39
	ATOM	2087	CG	ASP	216	-23.933	4.580	46.941	1.00	24.49
	ATOM	2088	OD1	ASP	216	-23.826	3.556	46.232	1.00	24.62
	ATOM	2089	OD2	ASP	216	-23.041	5.451	46.986	1.00	22.90
	ATOM	2090	C	ASP	216	-26.447	2.743	47.055	1.00	26.80
30	ATOM	2091	O	ASP	216	-26.222	1.539	46.923	1.00	27.31
	ATOM	2092	N	LYS	217	-27.143	3.454	46.173	1.00	30.69
	ATOM	2093	H	LYS	217	-27.270	4.407	46.343	1.00	0.00
	ATOM	2094	CA	LYS	217	-27.762	2.863	44.986	1.00	32.79
	ATOM	2095	CB	LYS	217	-28.498	3.946	44.189	1.00	36.64
35	ATOM	2096	CG	LYS	217	-27.606	4.818	43.290	1.00	41.04
	ATOM	2097	CD	LYS	217	-26.611	5.688	44.067	1.00	45.48
	ATOM	2098	CE	LYS	217	-27.307	6.796	44.850	1.00	49.13
	ATOM	2099	NZ	LYS	217	-26.330	7.760	45.446	1.00	51.31
	ATOM	2100	HZ1	LYS	217	-25.793	8.221	44.683	1.00	0.00

	ATOM	2101	HZ2	LYS	217	-25.684	7.252	46.083	1.00	0.00
	ATOM	2102	HZ3	LYS	217	-26.846	8.482	45.988	1.00	0.00
	ATOM	2103	C	LYS	217	-26.758	2.156	44.077	1.00	31.55
	ATOM	2104	O	LYS	217	-27.058	1.116	43.497	1.00	33.38
5	ATOM	2105	N	ALA	218	-25.567	2.731	43.959	1.00	30.81
	ATOM	2106	H	ALA	218	-25.384	3.544	44.464	1.00	0.00
	ATOM	2107	CA	ALA	218	-24.517	2.175	43.113	1.00	28.71
	ATOM	2108	CB	ALA	218	-23.534	3.265	42.728	1.00	27.61
	ATOM	2109	C	ALA	218	-23.781	1.011	43.773	1.00	29.11
10	ATOM	2110	O	ALA	218	-22.812	0.490	43.217	1.00	31.99
	ATOM	2111	N	GLY	219	-24.222	0.624	44.968	1.00	26.78
	ATOM	2112	H	GLY	219	-25.007	1.034	45.378	1.00	0.00
	ATOM	2113	CA	GLY	219	-23.588	-0.472	45.674	1.00	22.67
	ATOM	2114	C	GLY	219	-22.322	-0.078	46.411	1.00	22.34
15	ATOM	2115	O	GLY	219	-21.617	-0.937	46.943	1.00	22.37
	ATOM	2116	N	LYS	220	-22.043	1.218	46.472	1.00	18.20
	ATOM	2117	H	LYS	220	-22.639	1.850	46.038	1.00	0.00
	ATOM	2118	CA	LYS	220	-20.857	1.699	47.157	1.00	15.98
	ATOM	2119	CB	LYS	220	-20.334	2.951	46.464	1.00	19.42
20	ATOM	2120	CG	LYS	220	-19.724	2.658	45.103	1.00	24.14
	ATOM	2121	CD	LYS	220	-19.446	3.937	44.349	1.00	30.32
	ATOM	2122	CE	LYS	220	-18.686	3.669	43.057	1.00	35.44
	ATOM	2123	NZ	LYS	220	-17.267	3.293	43.318	1.00	39.63
	ATOM	2124	HZ1	LYS	220	-17.249	2.479	43.959	1.00	0.00
25	ATOM	2125	HZ2	LYS	220	-16.790	4.091	43.777	1.00	0.00
	ATOM	2126	HZ3	LYS	220	-16.781	3.043	42.432	1.00	0.00
	ATOM	2127	C	LYS	220	-21.119	1.954	48.636	1.00	13.83
	ATOM	2128	O	LYS	220	-22.221	2.346	49.019	1.00	12.56
	ATOM	2129	N	TYR	221	-20.112	1.677	49.459	1.00	10.21
30	ATOM	2130	H	TYR	221	-19.285	1.336	49.059	1.00	0.00
	ATOM	2131	CA	TYR	221	-20.194	1.863	50.903	1.00	9.57
	ATOM	2132	CB	TYR	221	-19.445	0.759	51.641	1.00	8.91
	ATOM	2133	CG	TYR	221	-19.910	-0.632	51.334	1.00	9.85
	ATOM	2134	CD1	TYR	221	-19.410	-1.318	50.231	1.00	9.27
35	ATOM	2135	CE1	TYR	221	-19.782	-2.629	49.974	1.00	13.17
	ATOM	2136	CD2	TYR	221	-20.805	-1.289	52.174	1.00	10.94
	ATOM	2137	CE2	TYR	221	-21.185	-2.605	51.928	1.00	13.53
	ATOM	2138	CZ	TYR	221	-20.665	-3.267	50.826	1.00	12.86
	ATOM	2139	OH	TYR	221	-20.995	-4.579	50.584	1.00	19.40

	ATOM	2140	HH	TYR	221	-20.857	-4.758	49.645	1.00	0.00
	ATOM	2141	C	TYR	221	-19.574	3.174	51.330	1.00	10.79
	ATOM	2142	O	TYR	221	-18.616	3.651	50.714	1.00	10.37
	ATOM	2143	N	CYS	222	-20.090	3.724	52.422	1.00	9.88
5	ATOM	2144	H	CYS	222	-20.863	3.315	52.870	1.00	0.00
	ATOM	2145	CA	CYS	222	-19.570	4.964	52.967	1.00	9.81
	ATOM	2146	CB	CYS	222	-19.774	6.126	51.986	1.00	10.60
	ATOM	2147	SG	CYS	222	-21.492	6.676	51.784	1.00	17.23
	ATOM	2148	C	CYS	222	-20.244	5.331	54.270	1.00	9.69
10	ATOM	2149	O	CYS	222	-21.345	4.860	54.579	1.00	7.62
	ATOM	2150	N	ILE	223	-19.521	6.097	55.074	1.00	10.22
	ATOM	2151	H	ILE	223	-18.601	6.331	54.815	1.00	0.00
	ATOM	2152	CA	ILE	223	-20.059	6.638	56.306	1.00	9.93
	ATOM	2153	CB	ILE	223	-18.925	6.995	57.300	1.00	6.84
15	ATOM	2154	CG2	ILE	223	-19.475	7.742	58.498	1.00	5.29
	ATOM	2155	CG1	ILE	223	-18.225	5.712	57.762	1.00	6.96
	ATOM	2156	CD	ILE	223	-16.938	5.946	58.525	1.00	9.34
	ATOM	2157	C	ILE	223	-20.697	7.902	55.706	1.00	11.78
	ATOM	2158	O	ILE	223	-20.109	8.528	54.823	1.00	12.45
20	ATOM	2159	N	PRO	224	-21.936	8.234	56.102	1.00	13.13
	ATOM	2160	CD	PRO	224	-22.736	7.595	57.167	1.00	13.77
	ATOM	2161	CA	PRO	224	-22.621	9.422	55.572	1.00	12.77
	ATOM	2162	CB	PRO	224	-23.707	9.672	56.616	1.00	12.95
	ATOM	2163	CG	PRO	224	-24.088	8.271	57.014	1.00	13.82
25	ATOM	2164	C	PRO	224	-21.715	10.647	55.374	1.00	11.50
	ATOM	2165	O	PRO	224	-21.090	11.126	56.315	1.00	9.13
	ATOM	2166	N	GLU	225	-21.645	11.124	54.132	1.00	14.71
	ATOM	2167	H	GLU	225	-22.179	10.664	53.448	1.00	0.00
	ATOM	2168	CA	GLU	225	-20.830	12.280	53.738	1.00	15.88
30	ATOM	2169	CB	GLU	225	-21.055	13.465	54.680	1.00	20.79
	ATOM	2170	CG	GLU	225	-22.439	14.080	54.631	1.00	26.35
	ATOM	2171	CD	GLU	225	-22.526	15.306	55.516	1.00	32.15
	ATOM	2172	OE1	GLU	225	-22.863	15.151	56.712	1.00	33.44
	ATOM	2173	OE2	GLU	225	-22.228	16.418	55.020	1.00	34.61
35	ATOM	2174	C	GLU	225	-19.330	12.006	53.641	1.00	13.50
	ATOM	2175	O	GLU	225	-18.536	12.937	53.502	1.00	14.62
	ATOM	2176	N	GLY	226	-18.939	10.740	53.707	1.00	10.60
	ATOM	2177	H	GLY	226	-19.593	10.021	53.791	1.00	0.00
	ATOM	2178	CA	GLY	226	-17.532	10.407	53.626	1.00	9.49

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	ATOM	2179	C	GLY	226	-17.172	9.830	52.273	1.00	7.50
	ATOM	2180	O	GLY	226	-18.004	9.771	51.373	1.00	7.18
	ATOM	2181	N	THR	227	-15.926	9.395	52.140	1.00	11.32
	ATOM	2182	H	THR	227	-15.314	9.439	52.909	1.00	0.00
5	ATOM	2183	CA	THR	227	-15.419	8.798	50.907	1.00	11.27
	ATOM	2184	CB	THR	227	-13.911	8.469	51.054	1.00	10.87
	ATOM	2185	OG1	THR	227	-13.191	9.664	51.370	1.00	11.75
	ATOM	2186	HG1	THR	227	-13.305	10.261	50.623	1.00	0.00
	ATOM	2187	CG2	THR	227	-13.350	7.891	49.783	1.00	9.00
10	ATOM	2188	C	THR	227	-16.191	7.513	50.609	1.00	11.40
	ATOM	2189	O	THR	227	-16.643	6.835	51.530	1.00	13.43
	ATOM	2190	N	LYS	228	-16.343	7.187	49.330	1.00	11.00
	ATOM	2191	H	LYS	228	-15.978	7.748	48.614	1.00	0.00
	ATOM	2192	CA	LYS	228	-17.056	5.986	48.927	1.00	11.19
15	ATOM	2193	CB	LYS	228	-18.118	6.329	47.882	1.00	15.00
	ATOM	2194	CG	LYS	228	-19.153	7.293	48.448	1.00	11.92
	ATOM	2195	CD	LYS	228	-20.385	7.410	47.598	1.00	15.46
	ATOM	2196	CE	LYS	228	-21.505	8.048	48.399	1.00	16.88
	ATOM	2197	NZ	LYS	228	-21.135	9.394	48.914	1.00	26.16
20	ATOM	2198	HZ1	LYS	228	-20.889	10.007	48.111	1.00	0.00
	ATOM	2199	HZ2	LYS	228	-20.321	9.311	49.557	1.00	0.00
	ATOM	2200	HZ3	LYS	228	-21.945	9.804	49.428	1.00	0.00
	ATOM	2201	C	LYS	228	-16.114	4.890	48.452	1.00	10.75
	ATOM	2202	O	LYS	228	-15.136	5.153	47.745	1.00	8.11
25	ATOM	2203	N	PHE	229	-16.412	3.661	48.866	1.00	8.50
	ATOM	2204	H	PHE	229	-17.223	3.514	49.399	1.00	0.00
	ATOM	2205	CA	PHE	229	-15.590	2.504	48.552	1.00	5.46
	ATOM	2206	CB	PHE	229	-14.963	1.973	49.843	1.00	4.60
	ATOM	2207	CG	PHE	229	-14.272	3.031	50.669	1.00	4.48
30	ATOM	2208	CD1	PHE	229	-14.983	3.792	51.590	1.00	7.15
	ATOM	2209	CD2	PHE	229	-12.913	3.269	50.525	1.00	5.66
	ATOM	2210	CE1	PHE	229	-14.350	4.767	52.352	1.00	4.56
	ATOM	2211	CE2	PHE	229	-12.280	4.242	51.284	1.00	5.66
	ATOM	2212	CZ	PHE	229	-13.003	4.991	52.199	1.00	2.65
35	ATOM	2213	C	PHE	229	-16.403	1.398	47.891	1.00	8.16
	ATOM	2214	O	PHE	229	-17.617	1.312	48.086	1.00	5.71
	ATOM	2215	N	ASP	230	-15.728	0.538	47.126	1.00	9.14
	ATOM	2216	H	ASP	230	-14.760	0.670	47.008	1.00	0.00
	ATOM	2217	CA	ASP	230	-16.394	-0.574	46.445	1.00	9.38

	ATOM	2218	CB	ASP	230	-15.574	-1.052	45.246	1.00	8.63
	ATOM	2219	CG	ASP	230	-15.869	-0.274	43.981	1.00	8.43
	ATOM	2220	OD1	ASP	230	-15.274	-0.608	42.947	1.00	9.85
	ATOM	2221	OD2	ASP	230	-16.698	0.654	43.998	1.00	11.91
5	ATOM	2222	C	ASP	230	-16.651	-1.761	47.363	1.00	10.64
	ATOM	2223	O	ASP	230	-17.541	-2.573	47.108	1.00	11.10
	ATOM	2224	N	THR	231	-15.824	-1.904	48.391	1.00	10.48
	ATOM	2225	H	THR	231	-15.090	-1.275	48.547	1.00	0.00
	ATOM	2226	CA	THR	231	-15.971	-3.007	49.321	1.00	6.74
10	ATOM	2227	CB	THR	231	-14.953	-4.131	49.036	1.00	7.00
	ATOM	2228	OG1	THR	231	-13.627	-3.614	49.171	1.00	8.09
	ATOM	2229	HG1	THR	231	-13.496	-3.068	48.382	1.00	0.00
	ATOM	2230	CG2	THR	231	-15.127	-4.692	47.635	1.00	9.33
	ATOM	2231	C	THR	231	-15.700	-2.501	50.719	1.00	5.98
15	ATOM	2232	O	THR	231	-15.050	-1.477	50.898	1.00	4.61
	ATOM	2233	N	LEU	232	-16.211	-3.224	51.704	1.00	7.05
	ATOM	2234	H	LEU	232	-16.795	-3.989	51.481	1.00	0.00
	ATOM	2235	CA	LEU	232	-16.001	-2.885	53.099	1.00	8.76
	ATOM	2236	CB	LEU	232	-16.881	-3.761	53.994	1.00	6.96
20	ATOM	2237	CG	LEU	232	-18.367	-3.450	54.121	1.00	6.67
	ATOM	2238	CD1	LEU	232	-19.044	-4.612	54.828	1.00	7.35
	ATOM	2239	CD2	LEU	232	-18.576	-2.150	54.897	1.00	6.04
	ATOM	2240	C	LEU	232	-14.534	-3.090	53.473	1.00	7.18
	ATOM	2241	O	LEU	232	-14.021	-2.433	54.374	1.00	9.95
25	ATOM	2242	N	TRP	233	-13.873	-4.022	52.796	1.00	6.47
	ATOM	2243	H	TRP	233	-14.348	-4.510	52.099	1.00	0.00
	ATOM	2244	CA	TRP	233	-12.464	-4.305	53.057	1.00	6.87
	ATOM	2245	CB	TRP	233	-11.979	-5.466	52.188	1.00	3.74
	ATOM	2246	CG	TRP	233	-10.687	-6.058	52.650	1.00	4.57
30	ATOM	2247	CD2	TRP	233	-9.359	-5.570	52.381	1.00	8.34
	ATOM	2248	CE2	TRP	233	-8.458	-6.423	53.060	1.00	6.83
	ATOM	2249	CE3	TRP	233	-8.844	-4.493	51.641	1.00	8.52
	ATOM	2250	CD1	TRP	233	-10.536	-7.154	53.440	1.00	5.21
	ATOM	2251	NE1	TRP	233	-9.204	-7.380	53.693	1.00	6.92
35	ATOM	2252	HE1	TRP	233	-8.861	-8.107	54.265	1.00	0.00
	ATOM	2253	CZ2	TRP	233	-7.073	-6.237	53.021	1.00	8.01
	ATOM	2254	CZ3	TRP	233	-7.458	-4.308	51.601	1.00	6.16
	ATOM	2255	CH2	TRP	233	-6.592	-5.177	52.292	1.00	7.69
	ATOM	2256	C	TRP	233	-11.617	-3.062	52.772	1.00	7.29

	ATOM	2257	O	TRP	233	-10.733	-2.700	53.561	1.00	9.21
	ATOM	2258	N	GLN	234	-11.902	-2.403	51.652	1.00	5.93
	ATOM	2259	H	GLN	234	-12.613	-2.733	51.066	1.00	0.00
	ATOM	2260	CA	GLN	234	-11.169	-1.204	51.262	1.00	4.78
5	ATOM	2261	CB	GLN	234	-11.443	-0.862	49.798	1.00	6.84
	ATOM	2262	CG	GLN	234	-10.836	-1.880	48.848	1.00	10.82
	ATOM	2263	CD	GLN	234	-11.380	-1.789	47.432	1.00	10.56
	ATOM	2264	OE1	GLN	234	-12.586	-1.878	47.209	1.00	8.62
	ATOM	2265	NE2	GLN	234	-10.487	-1.652	46.469	1.00	11.25
10	ATOM	2266	HE21	GLN	234	-9.531	-1.629	46.708	1.00	0.00
	ATOM	2267	HE22	GLN	234	-10.789	-1.580	45.537	1.00	0.00
	ATOM	2268	C	GLN	234	-11.449	-0.015	52.160	1.00	3.62
	ATOM	2269	O	GLN	234	-10.554	0.781	52.430	1.00	5.94
	ATOM	2270	N	LEU	235	-12.689	0.106	52.615	1.00	5.89
15	ATOM	2271	H	LEU	235	-13.364	-0.541	52.324	1.00	0.00
	ATOM	2272	CA	LEU	235	-13.081	1.190	53.511	1.00	4.73
	ATOM	2273	CB	LEU	235	-14.566	1.059	53.872	1.00	4.90
	ATOM	2274	CG	LEU	235	-15.185	2.047	54.874	1.00	6.15
	ATOM	2275	CD1	LEU	235	-16.630	2.350	54.483	1.00	8.45
20	ATOM	2276	CD2	LEU	235	-15.109	1.496	56.298	1.00	4.62
	ATOM	2277	C	LEU	235	-12.216	1.146	54.769	1.00	5.64
	ATOM	2278	O	LEU	235	-11.579	2.133	55.134	1.00	6.99
	ATOM	2279	N	VAL	236	-12.158	-0.025	55.390	1.00	5.96
	ATOM	2280	H	VAL	236	-12.661	-0.789	55.026	1.00	0.00
25	ATOM	2281	CA	VAL	236	-11.383	-0.223	56.603	1.00	8.27
	ATOM	2282	CB	VAL	236	-11.604	-1.650	57.157	1.00	9.38
	ATOM	2283	CG1	VAL	236	-10.658	-1.938	58.330	1.00	7.51
	ATOM	2284	CG2	VAL	236	-13.042	-1.816	57.587	1.00	5.71
	ATOM	2285	C	VAL	236	-9.892	0.031	56.406	1.00	9.49
30	ATOM	2286	O	VAL	236	-9.270	0.731	57.197	1.00	12.68
	ATOM	2287	N	GLU	237	-9.317	-0.524	55.347	1.00	10.79
	ATOM	2288	H	GLU	237	-9.854	-1.062	54.733	1.00	0.00
	ATOM	2289	CA	GLU	237	-7.887	-0.349	55.094	1.00	11.35
	ATOM	2290	CB	GLU	237	-7.430	-1.272	53.976	1.00	16.61
35	ATOM	2291	CG	GLU	237	-7.605	-2.731	54.340	1.00	22.80
	ATOM	2292	CD	GLU	237	-6.787	-3.144	55.547	1.00	24.22
	ATOM	2293	OE1	GLU	237	-5.597	-2.765	55.618	1.00	22.20
	ATOM	2294	OE2	GLU	237	-7.340	-3.852	56.416	1.00	23.12
	ATOM	2295	C	GLU	237	-7.474	1.076	54.796	1.00	9.15

	ATOM	2296	O	GLU	237	-6.380	1.498	55.156	1.00	12.17
	ATOM	2297	N	TYR	238	-8.355	1.809	54.128	1.00	9.53
	ATOM	2298	H	TYR	238	-9.205	1.398	53.859	1.00	0.00
	ATOM	2299	CA	TYR	238	-8.125	3.205	53.785	1.00	6.78
5	ATOM	2300	CB	TYR	238	-9.226	3.674	52.835	1.00	5.11
	ATOM	2301	CG	TYR	238	-9.016	5.049	52.254	1.00	6.85
	ATOM	2302	CD1	TYR	238	-8.241	5.232	51.112	1.00	6.52
	ATOM	2303	CE1	TYR	238	-8.072	6.503	50.549	1.00	10.87
	ATOM	2304	CD2	TYR	238	-9.619	6.169	52.830	1.00	9.19
10	ATOM	2305	CE2	TYR	238	-9.458	7.438	52.281	1.00	10.07
	ATOM	2306	CZ	TYR	238	-8.686	7.596	51.141	1.00	10.71
	ATOM	2307	OH	TYR	238	-8.540	8.843	50.592	1.00	14.33
	ATOM	2308	HH	TYR	238	-9.060	9.481	51.085	1.00	0.00
	ATOM	2309	C	TYR	238	-8.160	4.042	55.057	1.00	6.62
15	ATOM	2310	O	TYR	238	-7.335	4.929	55.247	1.00	6.71
	ATOM	2311	N	LEU	239	-9.113	3.731	55.931	1.00	7.40
	ATOM	2312	H	LEU	239	-9.745	3.006	55.745	1.00	0.00
	ATOM	2313	CA	LEU	239	-9.276	4.443	57.191	1.00	9.62
	ATOM	2314	CB	LEU	239	-10.675	4.198	57.774	1.00	8.00
20	ATOM	2315	CG	LEU	239	-11.814	4.773	56.918	1.00	8.26
	ATOM	2316	CD1	LEU	239	-13.168	4.365	57.461	1.00	2.00
	ATOM	2317	CD2	LEU	239	-11.696	6.285	56.865	1.00	6.62
	ATOM	2318	C	LEU	239	-8.170	4.092	58.187	1.00	11.33
	ATOM	2319	O	LEU	239	-8.076	4.689	59.261	1.00	11.19
25	ATOM	2320	N	LYS	240	-7.360	3.091	57.848	1.00	12.90
	ATOM	2321	H	LYS	240	-7.552	2.545	57.064	1.00	0.00
	ATOM	2322	CA	LYS	240	-6.221	2.725	58.687	1.00	15.35
	ATOM	2323	CB	LYS	240	-5.709	1.326	58.368	1.00	12.42
	ATOM	2324	CG	LYS	240	-6.446	0.171	59.010	1.00	16.17
30	ATOM	2325	CD	LYS	240	-5.570	-1.069	58.865	1.00	18.37
	ATOM	2326	CE	LYS	240	-6.272	-2.347	59.239	1.00	21.75
	ATOM	2327	NZ	LYS	240	-5.382	-3.491	58.897	1.00	22.57
	ATOM	2328	HZ1	LYS	240	-4.536	-3.458	59.499	1.00	0.00
	ATOM	2329	HZ2	LYS	240	-5.113	-3.415	57.895	1.00	0.00
35	ATOM	2330	HZ3	LYS	240	-5.890	-4.386	59.045	1.00	0.00
	ATOM	2331	C	LYS	240	-5.103	3.706	58.351	1.00	16.14
	ATOM	2332	O	LYS	240	-4.316	4.084	59.212	1.00	18.31
	ATOM	2333	N	LEU	241	-5.039	4.096	57.081	1.00	17.44
	ATOM	2334	H	LEU	241	-5.702	3.764	56.447	1.00	0.00

	ATOM	2335	CA	LEU	241	-4.023	5.015	56.584	1.00	20.78
	ATOM	2336	CB	LEU	241	-3.838	4.814	55.080	1.00	23.79
	ATOM	2337	CG	LEU	241	-3.473	3.389	54.637	1.00	29.02
	ATOM	2338	CD1	LEU	241	-3.580	3.258	53.116	1.00	31.10
5	ATOM	2339	CD2	LEU	241	-2.072	3.023	55.123	1.00	29.32
	ATOM	2340	C	LEU	241	-4.336	6.479	56.882	1.00	20.10
	ATOM	2341	O	LEU	241	-3.430	7.271	57.127	1.00	22.00
	ATOM	2342	N	LYS	242	-5.608	6.849	56.829	1.00	19.66
	ATOM	2343	H	LYS	242	-6.313	6.208	56.582	1.00	0.00
10	ATOM	2344	CA	LYS	242	-5.996	8.224	57.114	1.00	19.53
	ATOM	2345	CB	LYS	242	-5.892	9.082	55.844	1.00	22.06
	ATOM	2346	CG	LYS	242	-6.778	8.639	54.688	1.00	24.44
	ATOM	2347	CD	LYS	242	-6.367	9.308	53.386	1.00	24.79
	ATOM	2348	CE	LYS	242	-5.120	8.664	52.808	1.00	23.03
15	ATOM	2349	NZ	LYS	242	-4.732	9.280	51.518	1.00	23.85
	ATOM	2350	HZ1	LYS	242	-4.553	10.291	51.657	1.00	0.00
	ATOM	2351	HZ2	LYS	242	-5.490	9.155	50.820	1.00	0.00
	ATOM	2352	HZ3	LYS	242	-3.864	8.824	51.169	1.00	0.00
	ATOM	2353	C	LYS	242	-7.395	8.279	57.716	1.00	16.00
20	ATOM	2354	O	LYS	242	-8.313	7.645	57.218	1.00	15.48
	ATOM	2355	N	ALA	243	-7.540	9.047	58.793	1.00	18.41
	ATOM	2356	H	ALA	243	-6.733	9.494	59.123	1.00	0.00
	ATOM	2357	CA	ALA	243	-8.814	9.192	59.507	1.00	18.23
	ATOM	2358	CB	ALA	243	-8.690	10.251	60.597	1.00	15.43
25	ATOM	2359	C	ALA	243	-10.018	9.497	58.620	1.00	18.79
	ATOM	2360	O	ALA	243	-11.102	8.965	58.839	1.00	21.98
	ATOM	2361	N	ASP	244	-9.834	10.408	57.669	1.00	18.70
	ATOM	2362	H	ASP	244	-8.942	10.786	57.579	1.00	0.00
	ATOM	2363	CA	ASP	244	-10.888	10.804	56.737	1.00	19.33
30	ATOM	2364	CB	ASP	244	-11.023	9.741	55.633	1.00	19.97
	ATOM	2365	CG	ASP	244	-11.885	10.197	54.466	1.00	23.11
	ATOM	2366	OD1	ASP	244	-12.653	9.359	53.958	1.00	27.17
	ATOM	2367	OD2	ASP	244	-11.802	11.374	54.045	1.00	24.99
	ATOM	2368	C	ASP	244	-12.245	11.108	57.402	1.00	19.28
35	ATOM	2369	O	ASP	244	-13.293	10.622	56.969	1.00	19.97
	ATOM	2370	N	GLY	245	-12.219	11.934	58.445	1.00	19.45
	ATOM	2371	H	GLY	245	-11.383	12.294	58.773	1.00	0.00
	ATOM	2372	CA	GLY	245	-13.447	12.295	59.133	1.00	16.82
	ATOM	2373	C	GLY	245	-13.591	11.656	60.499	1.00	15.03

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	ATOM	2374	O	GLY	245	-14.259	12.202	61.369	1.00	16.04
	ATOM	2375	N	LEU	246	-13.000	10.482	60.676	1.00	13.51
	ATOM	2376	H	LEU	246	-12.517	10.063	59.930	1.00	0.00
	ATOM	2377	CA	LEU	246	-13.069	9.791	61.951	1.00	12.38
5	ATOM	2378	CB	LEU	246	-12.484	8.377	61.836	1.00	10.62
	ATOM	2379	CG	LEU	246	-13.117	7.342	60.907	1.00	8.08
	ATOM	2380	CD1	LEU	246	-12.370	6.037	61.059	1.00	7.46
	ATOM	2381	CD2	LEU	246	-14.568	7.138	61.240	1.00	9.01
	ATOM	2382	C	LEU	246	-12.311	10.576	63.019	1.00	12.72
10	ATOM	2383	O	LEU	246	-11.451	11.411	62.704	1.00	12.81
	ATOM	2384	N	ILE	247	-12.627	10.288	64.279	1.00	13.47
	ATOM	2385	H	ILE	247	-13.329	9.624	64.457	1.00	0.00
	ATOM	2386	CA	ILE	247	-11.995	10.947	65.418	1.00	13.85
	ATOM	2387	CB	ILE	247	-12.762	10.635	66.734	1.00	15.16
15	ATOM	2388	CG2	ILE	247	-12.608	9.163	67.118	1.00	12.79
	ATOM	2389	CG1	ILE	247	-12.268	11.529	67.869	1.00	15.17
	ATOM	2390	CD	ILE	247	-12.636	12.970	67.713	1.00	18.15
	ATOM	2391	C	ILE	247	-10.542	10.502	65.550	1.00	15.68
	ATOM	2392	O	ILE	247	-9.709	11.218	66.100	1.00	15.94
20	ATOM	2393	N	TYR	248	-10.244	9.320	65.020	1.00	17.12
	ATOM	2394	H	TYR	248	-10.933	8.784	64.573	1.00	0.00
	ATOM	2395	CA	TYR	248	-8.902	8.760	65.071	1.00	18.04
	ATOM	2396	CB	TYR	248	-8.623	8.221	66.478	1.00	19.67
	ATOM	2397	CG	TYR	248	-7.160	8.036	66.808	1.00	22.04
25	ATOM	2398	CD1	TYR	248	-6.666	6.795	67.194	1.00	21.97
	ATOM	2399	CE1	TYR	248	-5.330	6.630	67.539	1.00	24.30
	ATOM	2400	CD2	TYR	248	-6.277	9.113	66.770	1.00	25.29
	ATOM	2401	CE2	TYR	248	-4.940	8.962	67.113	1.00	26.21
	ATOM	2402	CZ	TYR	248	-4.471	7.720	67.498	1.00	26.00
30	ATOM	2403	OH	TYR	248	-3.147	7.572	67.853	1.00	27.81
	ATOM	2404	HH	TYR	248	-2.695	8.422	67.810	1.00	0.00
	ATOM	2405	C	TYR	248	-8.826	7.618	64.053	1.00	18.31
	ATOM	2406	O	TYR	248	-9.839	6.992	63.737	1.00	15.87
	ATOM	2407	N	CYS	249	-7.625	7.363	63.543	1.00	18.92
35	ATOM	2408	H	CYS	249	-6.862	7.889	63.852	1.00	0.00
	ATOM	2409	CA	CYS	249	-7.402	6.305	62.561	1.00	22.24
	ATOM	2410	CB	CYS	249	-5.996	6.413	61.961	1.00	25.63
	ATOM	2411	SG	CYS	249	-5.786	7.673	60.701	1.00	35.34
	ATOM	2412	C	CYS	249	-7.554	4.915	63.162	1.00	21.45

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	ATOM	2413	O	CYS	249	-7.292	4.709	64.350	1.00	22.48
	ATOM	2414	N	LEU	250	-7.940	3.963	62.321	1.00	19.48
	ATOM	2415	H	LEU	250	-8.101	4.207	61.383	1.00	0.00
	ATOM	2416	CA	LEU	250	-8.104	2.579	62.735	1.00	18.62
5	ATOM	2417	CB	LEU	250	-8.828	1.801	61.643	1.00	14.55
	ATOM	2418	CG	LEU	250	-10.355	1.767	61.685	1.00	15.19
	ATOM	2419	CD1	LEU	250	-10.924	2.936	62.474	1.00	15.11
	ATOM	2420	CD2	LEU	250	-10.909	1.703	60.275	1.00	10.15
	ATOM	2421	C	LEU	250	-6.717	1.999	62.958	1.00	19.97
10	ATOM	2422	O	LEU	250	-5.874	2.037	62.064	1.00	20.94
	ATOM	2423	N	LYS	251	-6.469	1.496	64.158	1.00	20.78
	ATOM	2424	H	LYS	251	-7.187	1.486	64.818	1.00	0.00
	ATOM	2425	CA	LYS	251	-5.167	0.937	64.479	1.00	22.81
	ATOM	2426	CB	LYS	251	-4.605	1.601	65.737	1.00	22.15
15	ATOM	2427	CG	LYS	251	-4.299	3.082	65.586	1.00	27.38
	ATOM	2428	CD	LYS	251	-3.054	3.298	64.739	1.00	33.83
	ATOM	2429	CE	LYS	251	-2.720	4.776	64.587	1.00	36.07
	ATOM	2430	NZ	LYS	251	-3.778	5.512	63.835	1.00	39.79
	ATOM	2431	HZ1	LYS	251	-4.678	5.441	64.346	1.00	0.00
20	ATOM	2432	HZ2	LYS	251	-3.889	5.099	62.891	1.00	0.00
	ATOM	2433	HZ3	LYS	251	-3.501	6.511	63.746	1.00	0.00
	ATOM	2434	C	LYS	251	-5.217	-0.574	64.657	1.00	24.22
	ATOM	2435	O	LYS	251	-5.026	-1.329	63.703	1.00	27.36
	ATOM	2436	N	GLU	252	-5.516	-1.013	65.871	1.00	24.92
25	ATOM	2437	H	GLU	252	-5.766	-0.390	66.588	1.00	0.00
	ATOM	2438	CA	GLU	252	-5.565	-2.430	66.174	1.00	27.42
	ATOM	2439	CB	GLU	252	-5.012	-2.671	67.577	1.00	32.86
	ATOM	2440	CG	GLU	252	-3.569	-2.212	67.765	1.00	43.35
	ATOM	2441	CD	GLU	252	-3.268	-1.746	69.186	1.00	49.35
30	ATOM	2442	OE1	GLU	252	-3.435	-2.543	70.137	1.00	51.97
	ATOM	2443	OE2	GLU	252	-2.858	-0.575	69.348	1.00	50.94
	ATOM	2444	C	GLU	252	-6.978	-2.977	66.071	1.00	26.08
	ATOM	2445	O	GLU	252	-7.929	-2.360	66.550	1.00	25.56
	ATOM	2446	N	ALA	253	-7.108	-4.132	65.432	1.00	24.39
35	ATOM	2447	H	ALA	253	-6.318	-4.560	65.066	1.00	0.00
	ATOM	2448	CA	ALA	253	-8.395	-4.786	65.278	1.00	25.57
	ATOM	2449	CB	ALA	253	-8.343	-5.756	64.123	1.00	24.04
	ATOM	2450	C	ALA	253	-8.747	-5.537	66.555	1.00	27.38
	ATOM	2451	O	ALA	253	-7.876	-6.121	67.194	1.00	27.58

	ATOM	2452	N	CYS	254	-10.014	-5.479	66.949	1.00	31.53
	ATOM	2453	H	CYS	254	-10.650	-4.969	66.417	1.00	0.00
	ATOM	2454	CA	CYS	254	-10.492	-6.198	68.125	1.00	32.99
	ATOM	2455	CB	CYS	254	-11.780	-5.561	68.652	1.00	33.76
5	ATOM	2456	SG	CYS	254	-12.375	-6.219	70.229	1.00	27.18
	ATOM	2457	C	CYS	254	-10.767	-7.569	67.511	1.00	36.46
	ATOM	2458	O	CYS	254	-11.755	-7.746	66.799	1.00	36.39
	ATOM	2459	N	PRO	255	-9.875	-8.542	67.759	1.00	41.03
	ATOM	2460	CD	PRO	255	-8.830	-8.385	68.790	1.00	42.01
10	ATOM	2461	CA	PRO	255	-9.899	-9.928	67.273	1.00	44.44
	ATOM	2462	CB	PRO	255	-8.601	-10.493	67.840	1.00	45.11
	ATOM	2463	CG	PRO	255	-8.523	-9.817	69.164	1.00	43.82
	ATOM	2464	C	PRO	255	-11.081	-10.826	67.628	1.00	46.86
	ATOM	2465	O	PRO	255	-12.133	-10.365	68.071	1.00	47.30
15	ATOM	2466	N	ASN	256	-10.888	-12.119	67.377	1.00	51.27
	ATOM	2467	H	ASN	256	-10.045	-12.478	67.027	1.00	0.00
	ATOM	2468	CA	ASN	256	-11.871	-13.161	67.655	1.00	53.98
	ATOM	2469	CB	ASN	256	-12.685	-13.504	66.400	1.00	54.04
	ATOM	2470	CG	ASN	256	-13.596	-12.375	65.964	1.00	53.84
20	ATOM	2471	OD1	ASN	256	-14.807	-12.413	66.187	1.00	53.28
	ATOM	2472	ND2	ASN	256	-13.021	-11.366	65.336	1.00	52.61
	ATOM	2473	HD21	ASN	256	-12.055	-11.405	65.202	1.00	0.00
	ATOM	2474	HD22	ASN	256	-13.555	-10.623	65.004	1.00	0.00
	ATOM	2475	C	ASN	256	-11.085	-14.393	68.105	1.00	55.88
25	ATOM	2476	O	ASN	256	-11.316	-14.859	69.241	1.00	56.61
	ATOM	2477	OT	ASN	256	-10.212	-14.846	67.326	1.00	57.33
	ATOM	2478	C	GLY	301	-28.599	6.538	66.632	1.00	34.96
	ATOM	2479	O	GLY	301	-28.689	7.658	66.126	1.00	35.59
	ATOM	2480	HT1	GLY	301	-29.755	6.289	64.304	1.00	0.00
30	ATOM	2481	HT2	GLY	301	-30.909	6.664	65.460	1.00	0.00
	ATOM	2482	N	GLY	301	-30.363	5.888	65.043	1.00	38.32
	ATOM	2483	HT3	GLY	301	-30.941	5.100	64.692	1.00	0.00
	ATOM	2484	CA	GLY	301	-29.470	5.406	66.131	1.00	35.83
	ATOM	2485	N	LEU	302	-27.760	6.248	67.620	1.00	32.78
35	ATOM	2486	H	LEU	302	-27.741	5.327	67.985	1.00	0.00
	ATOM	2487	CA	LEU	302	-26.861	7.240	68.203	1.00	28.83
	ATOM	2488	CB	LEU	302	-26.840	7.061	69.721	1.00	30.89
	ATOM	2489	CG	LEU	302	-26.726	8.304	70.601	1.00	35.75
	ATOM	2490	CD1	LEU	302	-27.093	7.919	72.026	1.00	34.77

	ATOM	2491	CD2	LEU	302	-25.328	8.914	70.520	1.00	36.69
	ATOM	2492	C	LEU	302	-25.465	7.028	67.613	1.00	24.31
	ATOM	2493	O	LEU	302	-24.620	6.352	68.205	1.00	22.95
	ATOM	2494	N	PTY	303	-25.236	7.580	66.427	1.00	20.12
5	ATOM	2495	H	PTY	303	-25.916	8.143	65.984	1.00	0.00
	ATOM	2496	CA	PTY	303	-23.952	7.422	65.758	1.00	17.44
	ATOM	2497	CB	PTY	303	-24.137	6.739	64.399	1.00	15.28
	ATOM	2498	CG	PTY	303	-24.685	5.341	64.531	1.00	11.57
	ATOM	2499	CD1	PTY	303	-23.836	4.247	64.652	1.00	14.15
10	ATOM	2500	CE1	PTY	303	-24.342	2.959	64.848	1.00	14.74
	ATOM	2501	CD2	PTY	303	-26.053	5.121	64.602	1.00	14.21
	ATOM	2502	CE2	PTY	303	-26.570	3.847	64.796	1.00	14.14
	ATOM	2503	CZ	PTY	303	-25.714	2.772	64.918	1.00	15.16
	ATOM	2504	OH	PTY	303	-26.257	1.519	65.078	1.00	16.76
15	ATOM	2505	OR1	PTY	303	-27.377	1.226	67.142	1.00	15.99
	ATOM	2506	OR2	PTY	303	-24.983	1.051	67.202	1.00	15.90
	ATOM	2507	OR3	PTY	303	-26.327	-0.668	66.144	1.00	16.79
	ATOM	2508	PR	PTY	303	-26.181	0.776	66.437	1.00	13.90
	ATOM	2509	C	PTY	303	-23.217	8.735	65.605	1.00	16.36
20	ATOM	2510	O	PTY	303	-23.831	9.795	65.484	1.00	19.96
	ATOM	2511	N	ASN	304	-21.895	8.660	65.620	1.00	15.34
	ATOM	2512	H	ASN	304	-21.498	7.781	65.684	1.00	0.00
	ATOM	2513	CA	ASN	304	-21.062	9.841	65.492	1.00	17.74
	ATOM	2514	CB	ASN	304	-19.676	9.569	66.078	1.00	17.48
25	ATOM	2515	CG	ASN	304	-19.731	9.186	67.544	1.00	21.95
	ATOM	2516	OD1	ASN	304	-19.541	10.024	68.421	1.00	25.74
	ATOM	2517	ND2	ASN	304	-20.008	7.918	67.818	1.00	20.37
	ATOM	2518	HD21	ASN	304	-20.117	7.310	67.059	1.00	0.00
	ATOM	2519	HD22	ASN	304	-20.130	7.655	68.755	1.00	0.00
30	ATOM	2520	C	ASN	304	-20.959	10.277	64.033	1.00	18.33
	ATOM	2521	O	ASN	304	-20.992	9.450	63.118	1.00	19.64
	ATOM	2522	N	GLU	305	-20.917	11.583	63.814	1.00	19.12
	ATOM	2523	H	GLU	305	-20.936	12.208	64.568	1.00	0.00
	ATOM	2524	CA	GLU	305	-20.802	12.114	62.463	1.00	22.88
35	ATOM	2525	CB	GLU	305	-21.555	13.441	62.336	1.00	28.84
	ATOM	2526	CG	GLU	305	-23.071	13.318	62.315	1.00	37.99
	ATOM	2527	CD	GLU	305	-23.767	14.669	62.216	1.00	43.48
	ATOM	2528	OE1	GLU	305	-24.877	14.800	62.775	1.00	46.82
	ATOM	2529	OE2	GLU	305	-23.214	15.597	61.580	1.00	45.74

	ATOM	2530	C	GLU	305	-19.329	12.339	62.158	1.00	21.37
	ATOM	2531	O	GLU	305	-18.504	12.412	63.068	1.00	21.67
	ATOM	2532	N	LEU	306	-19.002	12.437	60.878	1.00	19.52
	ATOM	2533	H	LEU	306	-19.698	12.382	60.192	1.00	0.00
5	ATOM	2534	CA	LEU	306	-17.628	12.667	60.469	1.00	17.30
	ATOM	2535	CB	LEU	306	-17.451	12.319	58.992	1.00	16.06
	ATOM	2536	CG	LEU	306	-17.537	10.838	58.627	1.00	12.83
	ATOM	2537	CD1	LEU	306	-17.235	10.669	57.151	1.00	16.69
	ATOM	2538	CD2	LEU	306	-16.555	10.040	59.462	1.00	10.12
10	ATOM	2539	C	LEU	306	-17.251	14.119	60.706	1.00	17.36
	ATOM	2540	O	LEU	306	-18.070	15.014	60.519	1.00	17.26
	ATOM	2541	N	GLN	307	-16.019	14.341	61.147	1.00	18.44
	ATOM	2542	H	GLN	307	-15.442	13.576	61.304	1.00	0.00
	ATOM	2543	CA	GLN	307	-15.509	15.685	61.396	1.00	23.01
15	ATOM	2544	CB	GLN	307	-14.187	15.618	62.167	1.00	25.06
	ATOM	2545	CG	GLN	307	-14.138	14.590	63.278	1.00	29.12
	ATOM	2546	CD	GLN	307	-14.549	15.148	64.618	1.00	30.60
	ATOM	2547	OE1	GLN	307	-15.721	15.453	64.849	1.00	34.83
	ATOM	2548	NE2	GLN	307	-13.583	15.285	65.517	1.00	31.12
20	ATOM	2549	HE21	GLN	307	-12.680	15.007	65.262	1.00	0.00
	ATOM	2550	HE22	GLN	307	-13.830	15.662	66.384	1.00	0.00
	ATOM	2551	C	GLN	307	-15.219	16.248	60.017	1.00	24.16
	ATOM	2552	O	GLN	307	-14.087	16.149	59.546	1.00	20.19
	ATOM	2553	N	LYS	308	-16.245	16.781	59.354	1.00	30.35
25	ATOM	2554	H	LYS	308	-17.125	16.772	59.791	1.00	0.00
	ATOM	2555	CA	LYS	308	-16.110	17.348	58.004	1.00	33.42
	ATOM	2556	CB	LYS	308	-17.486	17.666	57.388	1.00	34.90
	ATOM	2557	CG	LYS	308	-18.534	16.560	57.453	1.00	35.45
	ATOM	2558	CD	LYS	308	-19.567	16.860	58.532	1.00	36.09
30	ATOM	2559	CE	LYS	308	-20.215	18.229	58.316	1.00	37.61
	ATOM	2560	NZ	LYS	308	-21.196	18.594	59.391	1.00	37.36
	ATOM	2561	HZ1	LYS	308	-20.711	18.602	60.310	1.00	0.00
	ATOM	2562	HZ2	LYS	308	-21.961	17.891	59.403	1.00	0.00
	ATOM	2563	HZ3	LYS	308	-21.589	19.535	59.193	1.00	0.00
35	ATOM	2564	C	LYS	308	-15.296	18.632	58.059	1.00	34.50
	ATOM	2565	O	LYS	308	-15.720	19.675	57.561	1.00	36.22
	ATOM	2566	N	ASP	309	-14.110	18.542	58.637	1.00	34.96
	ATOM	2567	H	ASP	309	-13.714	17.697	58.867	1.00	0.00
	ATOM	2568	CA	ASP	309	-13.247	19.684	58.786	1.00	40.11

	ATOM	2569	CB	ASP	309	-13.833	20.653	59.825	1.00	43.76
	ATOM	2570	CG	ASP	309	-12.937	21.857	60.076	1.00	49.11
	ATOM	2571	OD1	ASP	309	-12.285	21.902	61.147	1.00	50.11
	ATOM	2572	OD2	ASP	309	-12.878	22.752	59.198	1.00	53.22
5	ATOM	2573	C	ASP	309	-11.919	19.147	59.266	1.00	41.03
	ATOM	2574	O	ASP	309	-11.021	18.889	58.468	1.00	42.47
	ATOM	2575	N	LYS	310	-11.848	18.882	60.565	1.00	42.27
	ATOM	2576	H	LYS	310	-12.637	19.008	61.117	1.00	0.00
	ATOM	2577	CA	LYS	310	-10.634	18.385	61.192	1.00	43.52
10	ATOM	2578	CB	LYS	310	-10.941	17.848	62.595	1.00	42.96
	ATOM	2579	CG	LYS	310	-11.586	18.868	63.525	1.00	42.02
	ATOM	2580	CD	LYS	310	-11.779	18.312	64.933	1.00	41.98
	ATOM	2581	CE	LYS	310	-10.445	18.138	65.654	1.00	41.82
	ATOM	2582	NZ	LYS	310	-10.613	17.544	67.012	1.00	40.90
15	ATOM	2583	HZ1	LYS	310	-11.030	16.595	66.920	1.00	0.00
	ATOM	2584	HZ2	LYS	310	-11.238	18.146	67.589	1.00	0.00
	ATOM	2585	HZ3	LYS	310	-9.684	17.470	67.471	1.00	0.00
	ATOM	2586	C	LYS	310	-9.895	17.331	60.372	1.00	43.43
	ATOM	2587	O	LYS	310	-8.664	17.323	60.353	1.00	46.61
20	ATOM	2588	N	ARG	311	-10.629	16.461	59.680	1.00	42.01
	ATOM	2589	H	ARG	311	-11.604	16.507	59.665	1.00	0.00
	ATOM	2590	CA	ARG	311	-9.982	15.415	58.891	1.00	42.72
	ATOM	2591	CB	ARG	311	-10.023	14.081	59.644	1.00	44.23
	ATOM	2592	CG	ARG	311	-10.718	14.119	61.003	1.00	45.03
25	ATOM	2593	CD	ARG	311	-9.748	14.485	62.100	1.00	45.93
	ATOM	2594	NE	ARG	311	-10.418	14.685	63.378	1.00	48.24
	ATOM	2595	HE	ARG	311	-11.373	14.913	63.367	1.00	0.00
	ATOM	2596	CZ	ARG	311	-9.818	14.577	64.561	1.00	51.76
	ATOM	2597	NH1	ARG	311	-8.530	14.264	64.635	1.00	54.63
30	ATOM	2598	HH11	ARG	311	-7.990	14.102	63.808	1.00	0.00
	ATOM	2599	HH12	ARG	311	-8.100	14.179	65.535	1.00	0.00
	ATOM	2600	NH2	ARG	311	-10.503	14.798	65.675	1.00	53.00
	ATOM	2601	HH21	ARG	311	-11.469	15.047	65.619	1.00	0.00
	ATOM	2602	HH22	ARG	311	-10.059	14.715	66.567	1.00	0.00
35	ATOM	2603	C	ARG	311	-10.555	15.212	57.491	1.00	42.09
	ATOM	2604	O	ARG	311	-11.725	14.856	57.346	1.00	40.29
	ATOM	2605	N	ALA	312	-9.714	15.389	56.469	1.00	44.22
	ATOM	2606	H	ALA	312	-8.797	15.704	56.637	1.00	0.00
	ATOM	2607	CA	ALA	312	-10.130	15.204	55.077	1.00	45.11

	ATOM	2608	CB	ALA	312	-11.440	15.947	54.818	1.00	46.77
	ATOM	2609	C	ALA	312	-9.086	15.616	54.024	1.00	47.98
	ATOM	2610	O	ALA	312	-8.221	16.462	54.283	1.00	50.03
	ATOM	2611	N	GLU	313	-9.168	14.980	52.852	1.00	45.77
5	ATOM	2612	H	GLU	313	-9.890	14.332	52.717	1.00	0.00
	ATOM	2613	CA	GLU	313	-8.306	15.252	51.693	1.00	43.28
	ATOM	2614	CB	GLU	313	-7.513	14.005	51.283	1.00	46.48
	ATOM	2615	CG	GLU	313	-6.297	13.659	52.143	1.00	46.91
	ATOM	2616	CD	GLU	313	-5.519	12.454	51.605	1.00	46.04
10	ATOM	2617	OE1	GLU	313	-6.023	11.761	50.692	1.00	44.53
	ATOM	2618	OE2	GLU	313	-4.397	12.198	52.097	1.00	45.88
	ATOM	2619	C	GLU	313	-9.314	15.575	50.583	1.00	42.06
	ATOM	2620	O	GLU	313	-10.513	15.680	50.869	1.00	45.47
	ATOM	2621	N	ALA	314	-8.870	15.668	49.329	1.00	31.51
15	ATOM	2622	H	ALA	314	-7.925	15.544	49.104	1.00	0.00
	ATOM	2623	CA	ALA	314	-9.801	15.967	48.239	1.00	27.16
	ATOM	2624	CB	ALA	314	-10.156	17.447	48.238	1.00	25.68
	ATOM	2625	C	ALA	314	-9.311	15.545	46.858	1.00	24.26
	ATOM	2626	O	ALA	314	-8.204	15.896	46.447	1.00	26.34
20	ATOM	2627	N	PTY	315	-10.127	14.766	46.158	1.00	18.14
	ATOM	2628	H	PTY	315	-11.001	14.528	46.522	1.00	0.00
	ATOM	2629	CA	PTY	315	-9.787	14.306	44.814	1.00	17.87
	ATOM	2630	CB	PTY	315	-10.410	12.934	44.531	1.00	16.23
	ATOM	2631	CG	PTY	315	-9.653	11.782	45.147	1.00	13.44
25	ATOM	2632	CD1	PTY	315	-8.546	11.233	44.504	1.00	10.57
	ATOM	2633	CE1	PTY	315	-7.821	10.199	45.083	1.00	12.46
	ATOM	2634	CD2	PTY	315	-10.024	11.261	46.388	1.00	14.63
	ATOM	2635	CE2	PTY	315	-9.308	10.226	46.977	1.00	12.19
	ATOM	2636	CZ	PTY	315	-8.207	9.702	46.319	1.00	14.21
30	ATOM	2637	OH	PTY	315	-7.508	8.671	46.896	1.00	10.17
	ATOM	2638	OR1	PTY	315	-6.491	9.535	48.913	1.00	12.42
	ATOM	2639	OR2	PTY	315	-5.416	9.978	46.850	1.00	12.44
	ATOM	2640	OR3	PTY	315	-5.389	7.728	47.750	1.00	8.98
	ATOM	2641	PR	PTY	315	-6.156	8.991	47.608	1.00	11.81
35	ATOM	2642	C	PTY	315	-10.273	15.318	43.781	1.00	18.42
	ATOM	2643	O	PTY	315	-11.328	15.928	43.950	1.00	18.97
	ATOM	2644	N	SER	316	-9.500	15.502	42.718	1.00	18.72
	ATOM	2645	H	SER	316	-8.700	14.957	42.602	1.00	0.00
	ATOM	2646	CA	SER	316	-9.871	16.443	41.676	1.00	17.28

	ATOM	2647	CB	SER	316	-8.642	16.849	40.874	1.00	16.40
	ATOM	2648	OG	SER	316	-7.653	17.434	41.705	1.00	23.25
	ATOM	2649	HG	SER	316	-7.610	16.969	42.563	1.00	0.00
	ATOM	2650	C	SER	316	-10.895	15.799	40.762	1.00	17.80
5	ATOM	2651	O	SER	316	-11.065	14.581	40.763	1.00	18.76
	ATOM	2652	N	GLU	317	-11.578	16.619	39.978	1.00	21.98
	ATOM	2653	H	GLU	317	-11.430	17.585	39.995	1.00	0.00
	ATOM	2654	CA	GLU	317	-12.577	16.113	39.048	1.00	26.81
	ATOM	2655	CB	GLU	317	-13.956	16.070	39.718	1.00	28.26
10	ATOM	2656	CG	GLU	317	-14.954	15.164	39.010	1.00	34.96
	ATOM	2657	CD	GLU	317	-16.232	14.947	39.803	1.00	40.11
	ATOM	2658	OE1	GLU	317	-17.320	14.948	39.180	1.00	42.24
	ATOM	2659	OE2	GLU	317	-16.153	14.763	41.041	1.00	42.30
	ATOM	2660	C	GLU	317	-12.594	17.020	37.826	1.00	27.50
15	ATOM	2661	O	GLU	317	-12.160	18.170	37.908	1.00	28.44
	ATOM	2662	N	ILE	318	-12.985	16.479	36.676	1.00	30.01
	ATOM	2663	H	ILE	318	-13.247	15.532	36.647	1.00	0.00
	ATOM	2664	CA	ILE	318	-13.052	17.287	35.463	1.00	32.57
	ATOM	2665	CB	ILE	318	-12.991	16.428	34.176	1.00	31.13
20	ATOM	2666	CG2	ILE	318	-13.313	17.282	32.955	1.00	30.52
	ATOM	2667	CG1	ILE	318	-11.598	15.824	34.009	1.00	29.07
	ATOM	2668	CD	ILE	318	-11.436	15.012	32.736	1.00	29.47
	ATOM	2669	C	ILE	318	-14.368	18.051	35.510	1.00	36.48
	ATOM	2670	O	ILE	318	-15.438	17.474	35.299	1.00	37.22
25	ATOM	2671	N	GLY	319	-14.281	19.335	35.841	1.00	40.36
	ATOM	2672	H	GLY	319	-13.427	19.760	36.061	1.00	0.00
	ATOM	2673	CA	GLY	319	-15.461	20.174	35.922	1.00	45.03
	ATOM	2674	C	GLY	319	-15.094	21.595	36.305	1.00	47.82
	ATOM	2675	O	GLY	319	-14.951	22.445	35.395	1.00	50.47
30	ATOM	2676	OT	GLY	319	-14.941	21.860	37.516	1.00	49.68
	ATOM	2677	OH2	H2O	501	-16.699	6.688	54.302	1.00	10.61
	ATOM	2678	H1	H2O	501	-16.511	6.418	53.393	1.00	0.00
	ATOM	2679	H2	H2O	501	-16.240	7.548	54.364	1.00	0.00
	ATOM	2680	OH2	H2O	502	-7.254	-1.610	48.935	1.00	17.08
35	ATOM	2681	H1	H2O	502	-6.444	-2.072	49.204	1.00	0.00
	ATOM	2682	H2	H2O	502	-7.404	-0.987	49.670	1.00	0.00
	ATOM	2683	OH2	H2O	503	-8.059	0.563	50.782	1.00	14.29
	ATOM	2684	H1	H2O	503	-8.518	0.793	49.971	1.00	0.00
	ATOM	2685	H2	H2O	503	-8.748	0.792	51.423	1.00	0.00

	ATOM	2686	OH2	H2O	504	-6.332	5.449	46.114	1.00	17.64
	ATOM	2687	H1	H2O	504	-5.403	5.611	45.858	1.00	0.00
	ATOM	2688	H2	H2O	504	-6.621	6.329	46.396	1.00	0.00
	ATOM	2689	OH2	H2O	505	-15.290	-6.823	51.705	1.00	5.22
5	ATOM	2690	H1	H2O	505	-15.750	-6.668	50.860	1.00	0.00
	ATOM	2691	H2	H2O	505	-14.376	-6.905	51.376	1.00	0.00
	ATOM	2692	OH2	H2O	506	-7.617	-1.501	46.161	1.00	17.32
	ATOM	2693	H1	H2O	506	-7.518	-1.538	47.137	1.00	0.00
	ATOM	2694	H2	H2O	506	-6.696	-1.494	45.885	1.00	0.00
10	ATOM	2695	OH2	H2O	507	-3.651	7.250	49.955	1.00	15.71
	ATOM	2696	H1	H2O	507	-4.520	7.609	50.184	1.00	0.00
	ATOM	2697	H2	H2O	507	-3.891	6.758	49.154	1.00	0.00
	ATOM	2698	OH2	H2O	508	-19.945	3.732	76.340	1.00	29.44
	ATOM	2699	H1	H2O	508	-20.832	3.744	75.964	1.00	0.00
15	ATOM	2700	H2	H2O	508	-19.954	4.642	76.685	1.00	0.00
	ATOM	2701	OH2	H2O	509	10.902	10.846	41.751	1.00	27.04
	ATOM	2702	H1	H2O	509	10.681	10.574	40.852	1.00	0.00
	ATOM	2703	H2	H2O	509	10.412	11.675	41.818	1.00	0.00
	ATOM	2704	OH2	H2O	510	-18.163	-5.347	50.709	1.00	9.29
20	ATOM	2705	H1	H2O	510	-18.386	-6.283	50.714	1.00	0.00
	ATOM	2706	H2	H2O	510	-19.045	-4.964	50.769	1.00	0.00
	ATOM	2707	OH2	H2O	511	-3.361	4.879	45.414	1.00	16.59
	ATOM	2708	H1	H2O	511	-3.647	4.007	45.146	1.00	0.00
	ATOM	2709	H2	H2O	511	-2.506	4.681	45.802	1.00	0.00
25	ATOM	2710	OH2	H2O	512	-15.018	8.551	55.143	1.00	25.00
	ATOM	2711	H1	H2O	512	-14.918	7.843	55.793	1.00	0.00
	ATOM	2712	H2	H2O	512	-14.547	9.270	55.600	1.00	0.00
	ATOM	2713	OH2	H2O	513	-4.825	-3.898	46.077	1.00	26.22
	ATOM	2714	H1	H2O	513	-4.880	-3.377	46.901	1.00	0.00
30	ATOM	2715	H2	H2O	513	-4.485	-3.251	45.428	1.00	0.00
	ATOM	2716	OH2	H2O	514	-22.319	7.998	61.532	1.00	14.50
	ATOM	2717	H1	H2O	514	-21.517	8.530	61.422	1.00	0.00
	ATOM	2718	H2	H2O	514	-22.478	8.172	62.465	1.00	0.00
	ATOM	2719	OH2	H2O	515	-10.803	5.341	41.005	1.00	25.05
35	ATOM	2720	H1	H2O	515	-10.171	5.135	40.303	1.00	0.00
	ATOM	2721	H2	H2O	515	-10.270	5.263	41.804	1.00	0.00
	ATOM	2722	OH2	H2O	516	0.902	5.902	27.902	1.00	36.64
	ATOM	2723	H1	H2O	516	0.214	6.451	28.280	1.00	0.00
	ATOM	2724	H2	H2O	516	1.440	6.522	27.390	1.00	0.00

	ATOM	2725	OH2	H2O	517	-4.715	-2.823	48.594	1.00	17.95
	ATOM	2726	H1	H2O	517	-4.476	-1.913	48.357	1.00	0.00
	ATOM	2727	H2	H2O	517	-3.933	-3.025	49.141	1.00	0.00
	ATOM	2728	OH2	H2O	518	-24.803	12.426	65.782	1.00	40.32
5	ATOM	2729	H1	H2O	518	-25.338	11.990	66.447	1.00	0.00
	ATOM	2730	H2	H2O	518	-24.368	11.668	65.372	1.00	0.00
	ATOM	2731	OH2	H2O	519	-7.490	-3.895	44.639	1.00	17.54
	ATOM	2732	H1	H2O	519	-7.799	-3.087	45.072	1.00	0.00
	ATOM	2733	H2	H2O	519	-6.561	-3.711	44.492	1.00	0.00
10	ATOM	2734	OH2	H2O	520	-12.970	1.075	39.173	1.00	19.76
	ATOM	2735	H1	H2O	520	-12.945	0.105	39.195	1.00	0.00
	ATOM	2736	H2	H2O	520	-12.514	1.300	39.992	1.00	0.00
	ATOM	2737	OH2	H2O	521	-11.261	10.026	31.185	1.00	20.36
	ATOM	2738	H1	H2O	521	-11.026	10.800	30.672	1.00	0.00
15	ATOM	2739	H2	H2O	521	-11.878	9.547	30.622	1.00	0.00
	ATOM	2740	OH2	H2O	522	-16.253	9.623	47.575	1.00	22.54
	ATOM	2741	H1	H2O	522	-16.330	10.315	46.911	1.00	0.00
	ATOM	2742	H2	H2O	522	-16.945	9.935	48.191	1.00	0.00
	ATOM	2743	OH2	H2O	523	-13.184	-18.559	49.110	1.00	32.97
20	ATOM	2744	H1	H2O	523	-13.959	-18.613	48.542	1.00	0.00
	ATOM	2745	H2	H2O	523	-12.455	-18.533	48.480	1.00	0.00
	ATOM	2746	OH2	H2O	524	6.370	1.830	43.428	1.00	20.14
	ATOM	2747	H1	H2O	524	5.423	1.688	43.475	1.00	0.00
	ATOM	2748	H2	H2O	524	6.738	0.978	43.159	1.00	0.00
25	ATOM	2749	OH2	H2O	525	-8.942	6.660	44.772	1.00	32.99
	ATOM	2750	H1	H2O	525	-8.594	7.220	44.081	1.00	0.00
	ATOM	2751	H2	H2O	525	-8.778	7.191	45.563	1.00	0.00
	ATOM	2752	OH2	H2O	526	-15.180	4.706	44.777	1.00	35.71
	ATOM	2753	H1	H2O	526	-15.373	4.421	45.677	1.00	0.00
30	ATOM	2754	H2	H2O	526	-14.575	5.433	44.939	1.00	0.00
	ATOM	2755	OH2	H2O	527	4.557	22.831	38.913	1.00	25.19
	ATOM	2756	H1	H2O	527	4.963	22.258	38.254	1.00	0.00
	ATOM	2757	H2	H2O	527	5.249	22.752	39.588	1.00	0.00
	ATOM	2758	OH2	H2O	528	0.327	-18.441	40.849	1.00	63.62
35	ATOM	2759	H1	H2O	528	0.588	-18.051	40.013	1.00	0.00
	ATOM	2760	H2	H2O	528	-0.242	-17.781	41.246	1.00	0.00
	ATOM	2761	OH2	H2O	529	6.903	14.794	51.066	1.00	29.24
	ATOM	2762	H1	H2O	529	7.219	15.307	50.322	1.00	0.00
	ATOM	2763	H2	H2O	529	5.950	14.776	50.943	1.00	0.00

	ATOM	2764	OH2	H2O	530	-7.974	-1.103	42.817	1.00	34.83
	ATOM	2765	H1	H2O	530	-7.354	-0.435	43.127	1.00	0.00
	ATOM	2766	H2	H2O	530	-8.438	-1.272	43.650	1.00	0.00
	ATOM	2767	OH2	H2O	531	-21.992	6.566	69.376	1.00	33.58
5	ATOM	2768	H1	H2O	531	-22.876	6.479	68.981	1.00	0.00
	ATOM	2769	H2	H2O	531	-22.202	7.118	70.144	1.00	0.00
	ATOM	2770	OH2	H2O	532	-0.211	-0.329	27.193	1.00	35.34
	ATOM	2771	H1	H2O	532	-1.107	-0.247	27.545	1.00	0.00
	ATOM	2772	H2	H2O	532	-0.184	0.393	26.558	1.00	0.00
10	ATOM	2773	OH2	H2O	533	-14.231	14.927	55.731	1.00	22.94
	ATOM	2774	H1	H2O	533	-14.283	14.056	55.341	1.00	0.00
	ATOM	2775	H2	H2O	533	-13.463	14.883	56.317	1.00	0.00
	ATOM	2776	OH2	H2O	535	-24.946	-4.413	65.364	1.00	21.19
	ATOM	2777	H1	H2O	535	-24.728	-4.688	64.466	1.00	0.00
15	ATOM	2778	H2	H2O	535	-24.390	-5.033	65.854	1.00	0.00
	ATOM	2779	OH2	H2O	536	-25.179	-8.028	64.357	1.00	22.68
	ATOM	2780	H1	H2O	536	-25.799	-8.497	63.785	1.00	0.00
	ATOM	2781	H2	H2O	536	-24.887	-7.298	63.794	1.00	0.00
	ATOM	2782	OH2	H2O	537	-1.848	9.665	51.881	1.00	19.01
20	ATOM	2783	H1	H2O	537	-2.268	8.825	51.657	1.00	0.00
	ATOM	2784	H2	H2O	537	-2.023	9.739	52.829	1.00	0.00
	ATOM	2785	OH2	H2O	538	-20.606	-24.004	46.721	1.00	48.06
	ATOM	2786	H1	H2O	538	-19.935	-24.681	46.905	1.00	0.00
	ATOM	2787	H2	H2O	538	-21.387	-24.399	47.126	1.00	0.00
25	ATOM	2788	OH2	H2O	539	-6.036	-10.488	42.753	1.00	24.63
	ATOM	2789	H1	H2O	539	-6.570	-11.253	42.552	1.00	0.00
	ATOM	2790	H2	H2O	539	-5.637	-10.712	43.597	1.00	0.00
	ATOM	2791	OH2	H2O	540	-20.360	12.924	50.060	1.00	44.45
	ATOM	2792	H1	H2O	540	-20.542	13.863	50.173	1.00	0.00
30	ATOM	2793	H2	H2O	540	-20.438	12.583	50.953	1.00	0.00
	ATOM	2794	OH2	H2O	541	-5.385	-8.053	62.249	1.00	38.68
	ATOM	2795	H1	H2O	541	-5.543	-7.543	63.043	1.00	0.00
	ATOM	2796	H2	H2O	541	-5.697	-7.436	61.567	1.00	0.00
	ATOM	2797	OH2	H2O	542	-0.772	18.789	49.390	1.00	42.13
35	ATOM	2798	H1	H2O	542	-1.284	18.533	50.147	1.00	0.00
	ATOM	2799	H2	H2O	542	-1.010	18.089	48.776	1.00	0.00
	ATOM	2800	OH2	H2O	543	5.290	26.308	37.785	1.00	44.00
	ATOM	2801	H1	H2O	543	5.875	26.038	38.496	1.00	0.00
	ATOM	2802	H2	H2O	543	5.853	26.326	37.011	1.00	0.00

	ATOM	2803	OH2	H2O	544	-13.634	-13.651	50.337	1.00	32.32
	ATOM	2804	H1	H2O	544	-13.622	-14.594	50.588	1.00	0.00
	ATOM	2805	H2	H2O	544	-14.365	-13.576	49.736	1.00	0.00
	ATOM	2806	OH2	H2O	545	6.675	4.419	46.648	1.00	30.02
5	ATOM	2807	H1	H2O	545	7.290	4.690	47.341	1.00	0.00
	ATOM	2808	H2	H2O	545	6.944	3.519	46.428	1.00	0.00
	ATOM	2809	OH2	H2O	546	-19.308	6.081	75.052	1.00	51.03
	ATOM	2810	H1	H2O	546	-19.538	6.138	74.117	1.00	0.00
	ATOM	2811	H2	H2O	546	-18.372	5.871	75.036	1.00	0.00
10	ATOM	2812	OH2	H2O	547	-0.121	9.589	22.739	1.00	39.87
	ATOM	2813	H1	H2O	547	0.690	10.066	22.559	1.00	0.00
	ATOM	2814	H2	H2O	547	-0.740	10.279	23.010	1.00	0.00
	ATOM	2815	OH2	H2O	549	-21.186	-9.641	52.393	1.00	33.61
	ATOM	2816	H1	H2O	549	-21.706	-9.261	51.676	1.00	0.00
15	ATOM	2817	H2	H2O	549	-20.925	-10.499	52.022	1.00	0.00
	ATOM	2818	OH2	H2O	550	-19.368	-9.513	74.224	1.00	42.38
	ATOM	2819	H1	H2O	550	-19.314	-8.555	74.189	1.00	0.00
	ATOM	2820	H2	H2O	550	-18.853	-9.794	73.467	1.00	0.00
	ATOM	2821	OH2	H2O	551	-29.465	1.964	65.682	1.00	30.82
20	ATOM	2822	H1	H2O	551	-28.568	1.698	65.445	1.00	0.00
	ATOM	2823	H2	H2O	551	-29.959	1.156	65.517	1.00	0.00
	ATOM	2824	OH2	H2O	552	-11.132	-14.092	61.004	1.00	44.69
	ATOM	2825	H1	H2O	552	-11.162	-13.825	60.080	1.00	0.00
	ATOM	2826	H2	H2O	552	-10.792	-14.983	60.930	1.00	0.00
25	ATOM	2827	OH2	H2O	553	15.549	7.780	43.275	1.00	41.22
	ATOM	2828	H1	H2O	553	16.001	7.569	42.453	1.00	0.00
	ATOM	2829	H2	H2O	553	15.451	8.759	43.198	1.00	0.00
	ATOM	2830	OH2	H2O	554	-6.955	-6.005	57.945	1.00	42.99
	ATOM	2831	H1	H2O	554	-6.261	-6.655	58.193	1.00	0.00
30	ATOM	2832	H2	H2O	554	-6.769	-5.912	57.007	1.00	0.00
	ATOM	2833	OH2	H2O	555	-26.977	-3.406	67.817	1.00	32.14
	ATOM	2834	H1	H2O	555	-26.901	-2.533	67.411	1.00	0.00
	ATOM	2835	H2	H2O	555	-26.567	-3.960	67.122	1.00	0.00
	ATOM	2836	OH2	H2O	556	-28.411	-2.810	64.708	1.00	30.05
35	ATOM	2837	H1	H2O	556	-28.703	-3.042	65.597	1.00	0.00
	ATOM	2838	H2	H2O	556	-27.572	-2.359	64.889	1.00	0.00
	ATOM	2839	OH2	H2O	557	-3.769	0.192	55.470	1.00	36.92
	ATOM	2840	H1	H2O	557	-3.997	0.505	54.588	1.00	0.00
	ATOM	2841	H2	H2O	557	-4.594	0.325	55.939	1.00	0.00

	ATOM	2842	OH2	H2O	558	-18.369	11.227	49.122	1.00	40.83
	ATOM	2843	H1	H2O	558	-19.062	11.911	49.168	1.00	0.00
	ATOM	2844	H2	H2O	558	-18.590	10.704	49.898	1.00	0.00
	ATOM	2845	OH2	H2O	559	-5.557	1.430	51.259	1.00	37.40
5	ATOM	2846	H1	H2O	559	-6.379	0.902	51.227	1.00	0.00
	ATOM	2847	H2	H2O	559	-5.811	2.195	50.750	1.00	0.00
	ATOM	2848	OH2	H2O	560	-1.244	-1.789	50.252	1.00	42.03
	ATOM	2849	H1	H2O	560	-1.114	-2.419	49.540	1.00	0.00
	ATOM	2850	H2	H2O	560	-0.486	-1.214	50.163	1.00	0.00
10	ATOM	2851	OH2	H2O	561	-13.464	-16.412	50.896	1.00	40.41
	ATOM	2852	H1	H2O	561	-13.891	-17.167	51.314	1.00	0.00
	ATOM	2853	H2	H2O	561	-12.907	-16.874	50.251	1.00	0.00
	ATOM	2854	OH2	H2O	563	8.297	7.021	48.013	1.00	45.26
	ATOM	2855	H1	H2O	563	9.196	6.664	48.079	1.00	0.00
15	ATOM	2856	H2	H2O	563	8.400	7.891	48.412	1.00	0.00
	ATOM	2857	OH2	H2O	569	-18.672	9.411	70.985	1.00	42.69
	ATOM	2858	H1	H2O	569	-18.454	10.301	70.720	1.00	0.00
	ATOM	2859	H2	H2O	569	-19.299	9.181	70.297	1.00	0.00
	ATOM	2860	OH2	H2O	570	-4.013	16.605	50.811	1.00	50.36
20	ATOM	2861	H1	H2O	570	-3.642	15.998	51.464	1.00	0.00
	ATOM	2862	H2	H2O	570	-4.727	17.023	51.309	1.00	0.00
	ATOM	2863	OH2	H2O	572	-6.268	16.662	44.180	1.00	24.25
	ATOM	2864	H1	H2O	572	-6.777	16.796	45.000	1.00	0.00
	ATOM	2865	H2	H2O	572	-5.615	17.379	44.261	1.00	0.00
25	ATOM	2866	OH2	H2O	573	-18.387	-26.644	47.160	1.00	49.62
	ATOM	2867	H1	H2O	573	-17.586	-26.570	46.621	1.00	0.00
	ATOM	2868	H2	H2O	573	-18.382	-27.600	47.318	1.00	0.00
	ATOM	2869	OH2	H2O	574	-11.225	-10.882	43.386	1.00	28.82
	ATOM	2870	H1	H2O	574	-12.100	-10.489	43.454	1.00	0.00
30	ATOM	2871	H2	H2O	574	-11.400	-11.765	43.056	1.00	0.00
	ATOM	2872	OH2	H2O	575	-7.241	6.911	24.257	1.00	46.54
	ATOM	2873	H1	H2O	575	-6.378	7.294	24.478	1.00	0.00
	ATOM	2874	H2	H2O	575	-7.127	6.659	23.334	1.00	0.00
	ATOM	2875	OH2	H2O	576	-2.732	3.489	69.646	1.00	35.00
35	ATOM	2876	H1	H2O	576	-2.509	3.272	68.740	1.00	0.00
	ATOM	2877	H2	H2O	576	-3.201	4.317	69.547	1.00	0.00
	ATOM	2878	OH2	H2O	577	-1.004	-5.395	42.848	1.00	31.83
	ATOM	2879	H1	H2O	577	-1.718	-5.183	42.244	1.00	0.00
	ATOM	2880	H2	H2O	577	-0.242	-5.437	42.261	1.00	0.00

	ATOM	2881	OH2	H2O	579	2.618	6.038	53.054	1.00	53.16
	ATOM	2882	H1	H2O	579	2.206	5.196	53.266	1.00	0.00
	ATOM	2883	H2	H2O	579	3.530	5.782	52.875	1.00	0.00
	ATOM	2884	OH2	H2O	580	-3.109	1.708	61.212	1.00	32.77
5	ATOM	2885	H1	H2O	580	-4.013	1.787	61.547	1.00	0.00
	ATOM	2886	H2	H2O	580	-3.145	2.263	60.427	1.00	0.00
	ATOM	2887	OH2	H2O	581	-15.517	7.216	36.498	1.00	45.24
	ATOM	2888	H1	H2O	581	-14.609	7.036	36.239	1.00	0.00
	ATOM	2889	H2	H2O	581	-15.977	6.404	36.259	1.00	0.00
10	ATOM	2890	OH2	H2O	582	4.831	21.847	47.571	1.00	53.78
	ATOM	2891	H1	H2O	582	5.295	22.312	46.821	1.00	0.00
	ATOM	2892	H2	H2O	582	5.264	20.951	47.474	1.00	0.00
	ATOM	2893	OH2	H2O	583	-7.370	-2.505	28.449	1.00	43.85
	ATOM	2894	H1	H2O	583	-7.859	-2.031	27.773	1.00	0.00
15	ATOM	2895	H2	H2O	583	-8.070	-2.637	29.095	1.00	0.00
	ATOM	2896	OH2	H2O	584	11.021	8.553	47.239	1.00	55.00
	ATOM	2897	H1	H2O	584	11.035	9.388	47.727	1.00	0.00
	ATOM	2898	H2	H2O	584	11.358	8.841	46.355	1.00	0.00
	ATOM	2899	OH2	H2O	585	-13.463	4.859	41.287	1.00	51.26
20	ATOM	2900	H1	H2O	585	-13.880	5.285	42.041	1.00	0.00
	ATOM	2901	H2	H2O	585	-12.578	5.274	41.218	1.00	0.00
	ATOM	2902	OH2	H2O	586	-21.459	-21.141	46.452	1.00	38.96
	ATOM	2903	H1	H2O	586	-20.860	-20.849	47.150	1.00	0.00
	ATOM	2904	H2	H2O	586	-21.155	-22.070	46.366	1.00	0.00
25	ATOM	2905	OH2	H2O	587	9.552	9.085	29.404	1.00	21.31
	ATOM	2906	H1	H2O	587	10.017	9.328	28.595	1.00	0.00
	ATOM	2907	H2	H2O	587	8.874	8.487	29.061	1.00	0.00
	ATOM	2908	OH2	H2O	588	-18.589	16.079	53.026	1.00	47.95
	ATOM	2909	H1	H2O	588	-17.885	16.496	53.527	1.00	0.00
30	ATOM	2910	H2	H2O	588	-18.406	15.135	53.154	1.00	0.00
	ATOM	2911	OH2	H2O	589	11.877	9.205	44.689	1.00	37.00
	ATOM	2912	H1	H2O	589	12.160	9.585	43.847	1.00	0.00
	ATOM	2913	H2	H2O	589	12.543	8.490	44.824	1.00	0.00
	ATOM	2914	OH2	H2O	592	-26.188	-5.587	57.097	1.00	33.07
35	ATOM	2915	H1	H2O	592	-26.971	-5.989	57.502	1.00	0.00
	ATOM	2916	H2	H2O	592	-26.094	-4.777	57.619	1.00	0.00
	ATOM	2917	OH2	H2O	593	-12.898	10.911	38.656	1.00	46.97
	ATOM	2918	H1	H2O	593	-12.354	10.108	38.666	1.00	0.00
	ATOM	2919	H2	H2O	593	-13.273	10.940	39.540	1.00	0.00

	ATOM	2920	OH2	H2O	594	-2.882	16.968	48.295	1.00	30.83
	ATOM	2921	H1	H2O	594	-3.396	17.749	48.079	1.00	0.00
	ATOM	2922	H2	H2O	594	-3.313	16.697	49.134	1.00	0.00
	ATOM	2923	OH2	H2O	595	13.656	7.244	45.221	1.00	39.29
5	ATOM	2924	H1	H2O	595	14.189	7.235	44.397	1.00	0.00
	ATOM	2925	H2	H2O	595	14.368	7.167	45.864	1.00	0.00
	ATOM	2926	OH2	H2O	596	10.754	5.887	46.780	1.00	58.01
	ATOM	2927	H1	H2O	596	10.942	6.831	46.995	1.00	0.00
	ATOM	2928	H2	H2O	596	11.653	5.535	46.772	1.00	0.00
10	ATOM	2929	OH2	H2O	597	8.570	-1.874	32.277	1.00	42.55
	ATOM	2930	H1	H2O	597	8.461	-2.699	31.792	1.00	0.00
	ATOM	2931	H2	H2O	597	7.661	-1.660	32.512	1.00	0.00
	ATOM	2932	OH2	H2O	598	15.043	10.456	42.923	1.00	62.88
	ATOM	2933	H1	H2O	598	14.279	10.904	43.307	1.00	0.00
15	ATOM	2934	H2	H2O	598	15.457	11.173	42.429	1.00	0.00
	ATOM	2935	OH2	H2O	599	-15.660	0.506	40.466	1.00	47.74
	ATOM	2936	H1	H2O	599	-16.222	0.052	39.836	1.00	0.00
	ATOM	2937	H2	H2O	599	-15.144	1.096	39.903	1.00	0.00
	ATOM	2938	OH2	H2O	601	10.395	0.423	33.259	1.00	37.60
20	ATOM	2939	H1	H2O	601	10.006	0.653	34.105	1.00	0.00
	ATOM	2940	H2	H2O	601	9.821	-0.291	32.928	1.00	0.00
	ATOM	2941	OH2	H2O	602	-8.774	4.671	74.569	1.00	26.62
	ATOM	2942	H1	H2O	602	-8.038	4.434	75.158	1.00	0.00
	ATOM	2943	H2	H2O	602	-8.979	3.782	74.258	1.00	0.00
25	ATOM	2944	OH2	H2O	603	-17.104	-12.783	62.725	1.00	37.86
	ATOM	2945	H1	H2O	603	-16.954	-13.496	62.099	1.00	0.00
	ATOM	2946	H2	H2O	603	-16.217	-12.397	62.806	1.00	0.00
	ATOM	2947	OH2	H2O	604	-18.900	-20.100	39.570	1.00	34.28
	ATOM	2948	H1	H2O	604	-18.978	-19.931	40.517	1.00	0.00
30	ATOM	2949	H2	H2O	604	-19.834	-20.252	39.318	1.00	0.00
	ATOM	2950	OH2	H2O	605	-5.985	-5.412	60.745	1.00	36.79
	ATOM	2951	H1	H2O	605	-5.650	-4.512	60.798	1.00	0.00
	ATOM	2952	H2	H2O	605	-6.609	-5.357	60.001	1.00	0.00
	ATOM	2953	OH2	H2O	606	-7.708	-2.084	36.092	1.00	21.56
35	ATOM	2954	H1	H2O	606	-6.902	-1.784	35.650	1.00	0.00
	ATOM	2955	H2	H2O	606	-8.190	-1.262	36.233	1.00	0.00
	ATOM	2956	OH2	H2O	608	-3.614	10.212	57.878	1.00	65.19
	ATOM	2957	H1	H2O	608	-3.452	9.262	57.744	1.00	0.00
	ATOM	2958	H2	H2O	608	-3.027	10.425	58.606	1.00	0.00

	ATOM	2959	OH2	H2O	609	-3.860	23.973	29.811	1.00	50.06
	ATOM	2960	H1	H2O	609	-3.959	23.569	28.947	1.00	0.00
	ATOM	2961	H2	H2O	609	-4.765	24.102	30.103	1.00	0.00
	ATOM	2962	OH2	H2O	610	-14.484	-29.114	38.149	1.00	37.42
5	ATOM	2963	H1	H2O	610	-13.947	-29.402	38.898	1.00	0.00
	ATOM	2964	H2	H2O	610	-15.333	-29.510	38.352	1.00	0.00
	ATOM	2965	OH2	H2O	611	-21.240	-8.832	55.096	1.00	28.35
	ATOM	2966	H1	H2O	611	-21.322	-9.290	54.233	1.00	0.00
	ATOM	2967	H2	H2O	611	-21.978	-8.198	55.041	1.00	0.00
10	ATOM	2968	OH2	H2O	612	-28.312	0.830	71.261	1.00	57.03
	ATOM	2969	H1	H2O	612	-27.631	0.653	70.617	1.00	0.00
	ATOM	2970	H2	H2O	612	-28.949	0.130	71.091	1.00	0.00
	ATOM	2971	OH2	H2O	613	-12.785	13.825	37.299	1.00	58.02
	ATOM	2972	H1	H2O	613	-13.581	13.348	37.068	1.00	0.00
15	ATOM	2973	H2	H2O	613	-12.320	13.191	37.859	1.00	0.00
	ATOM	2974	OH2	H2O	614	-26.951	9.367	64.841	1.00	44.43
	ATOM	2975	H1	H2O	614	-27.479	9.463	64.039	1.00	0.00
	ATOM	2976	H2	H2O	614	-27.225	10.150	65.326	1.00	0.00
	ATOM	2977	OH2	H2O	615	0.669	-5.217	31.942	1.00	34.30
20	ATOM	2978	H1	H2O	615	1.054	-5.954	32.433	1.00	0.00
	ATOM	2979	H2	H2O	615	-0.020	-5.664	31.430	1.00	0.00
	ATOM	2980	OH2	H2O	616	-21.268	-20.889	38.280	1.00	52.02
	ATOM	2981	H1	H2O	616	-20.821	-20.660	37.462	1.00	0.00
	ATOM	2982	H2	H2O	616	-21.549	-21.801	38.127	1.00	0.00
25	ATOM	2983	OH2	H2O	617	-12.839	10.577	73.997	1.00	32.65
	ATOM	2984	H1	H2O	617	-13.386	10.619	73.198	1.00	0.00
	ATOM	2985	H2	H2O	617	-12.500	9.678	73.936	1.00	0.00
	ATOM	2986	OH2	H2O	618	-16.254	12.102	64.699	1.00	39.97
	ATOM	2987	H1	H2O	618	-16.278	12.774	65.388	1.00	0.00
30	ATOM	2988	H2	H2O	618	-16.940	12.440	64.106	1.00	0.00
	ATOM	2989	OH2	H2O	619	0.609	7.758	53.655	1.00	59.42
	ATOM	2990	H1	H2O	619	1.450	7.256	53.684	1.00	0.00
	ATOM	2991	H2	H2O	619	0.683	8.342	54.416	1.00	0.00
	ATOM	2992	OH2	H2O	620	-4.989	-8.010	58.309	1.00	38.58
35	ATOM	2993	H1	H2O	620	-5.068	-8.214	59.248	1.00	0.00
	ATOM	2994	H2	H2O	620	-4.822	-8.893	57.952	1.00	0.00
	ATOM	2995	OH2	H2O	621	-26.221	-7.530	53.875	1.00	52.25
	ATOM	2996	H1	H2O	621	-25.549	-8.202	53.730	1.00	0.00
	ATOM	2997	H2	H2O	621	-26.714	-7.882	54.627	1.00	0.00

	ATOM	2998	OH2	H2O	622	-28.638	3.741	68.846	1.00	59.40
	ATOM	2999	H1	H2O	622	-28.605	3.555	69.794	1.00	0.00
	ATOM	3000	H2	H2O	622	-28.709	2.848	68.480	1.00	0.00
	ATOM	3001	OH2	H2O	623	-2.090	21.292	26.341	1.00	57.48
5	ATOM	3002	H1	H2O	623	-1.329	21.457	26.918	1.00	0.00
	ATOM	3003	H2	H2O	623	-1.757	21.533	25.471	1.00	0.00
	ATOM	3004	OH2	H2O	624	2.746	10.956	28.128	1.00	62.18
	ATOM	3005	H1	H2O	624	2.977	11.822	27.786	1.00	0.00
	ATOM	3006	H2	H2O	624	1.817	10.899	27.885	1.00	0.00
10	ATOM	3007	OH2	H2O	625	-21.125	-12.685	57.962	1.00	56.36
	ATOM	3008	H1	H2O	625	-22.032	-12.954	57.802	1.00	0.00
	ATOM	3009	H2	H2O	625	-21.176	-11.723	57.883	1.00	0.00
	ATOM	3010	OH2	H2O	626	-3.498	0.232	28.222	1.00	45.90
	ATOM	3011	H1	H2O	626	-3.396	-0.544	28.792	1.00	0.00
15	ATOM	3012	H2	H2O	626	-4.076	-0.127	27.533	1.00	0.00
	ATOM	3013	OH2	H2O	627	-6.243	-1.618	39.632	1.00	33.00
	ATOM	3014	H1	H2O	627	-6.546	-0.718	39.813	1.00	0.00
	ATOM	3015	H2	H2O	627	-6.989	-2.019	39.186	1.00	0.00

END

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*Note: See copyright notice on page 1.

Appendix III: Coordinates for the 3D structure of ZAP-NC:z1
"dimer" structure (two molecules of complex per unit cell)*

5 REMARK FILENAME="tzape-zetal-reb7-wat-slow.pdb"

REMARK TOPH19.pep -MACRO for protein sequence

created by user: marcos

	ATOM	1	CB	ASP	3	3.023	-3.462	13.100	1.00	13.09
	ATOM	2	CG	ASP	3	3.616	-2.223	12.417	1.00	20.07
10	ATOM	3	OD1	ASP	3	3.875	-2.263	11.212	1.00	23.94
	ATOM	4	OD2	ASP	3	3.795	-1.198	13.066	1.00	20.96
	ATOM	5	C	ASP	3	3.125	-2.930	15.585	1.00	11.37
	ATOM	6	O	ASP	3	1.915	-2.908	15.816	1.00	14.62
	ATOM	7	HT1	ASP	3	1.919	-4.746	15.191	1.00	0.00
15	ATOM	8	HT2	ASP	3	3.317	-5.471	15.778	1.00	0.00
	ATOM	9	N	ASP	3	2.872	-5.087	14.923	1.00	17.39
	ATOM	10	HT3	ASP	3	2.808	-5.797	14.172	1.00	0.00
	ATOM	11	CA	ASP	3	3.564	-3.885	14.482	1.00	13.78
	ATOM	12	N	PRO	4	3.958	-2.177	16.299	1.00	6.97
20	ATOM	13	CD	PRO	4	5.405	-2.209	16.150	1.00	10.48
	ATOM	14	CA	PRO	4	3.556	-1.192	17.314	1.00	10.28
	ATOM	15	CB	PRO	4	4.853	-0.568	17.733	1.00	9.59
	ATOM	16	CG	PRO	4	5.881	-1.611	17.455	1.00	10.34
	ATOM	17	C	PRO	4	2.524	-0.151	16.856	1.00	12.09
25	ATOM	18	O	PRO	4	1.665	0.351	17.601	1.00	15.40
	ATOM	19	N	ALA	5	2.568	0.146	15.556	1.00	14.44
	ATOM	20	H	ALA	5	3.317	-0.168	15.008	1.00	0.00
	ATOM	21	CA	ALA	5	1.662	1.120	14.996	1.00	11.85
	ATOM	22	CB	ALA	5	2.291	1.818	13.819	1.00	11.48
30	ATOM	23	C	ALA	5	0.348	0.580	14.532	1.00	12.81
	ATOM	24	O	ALA	5	-0.543	1.361	14.246	1.00	14.41
	ATOM	25	N	ALA	6	0.126	-0.726	14.574	1.00	10.58
	ATOM	26	H	ALA	6	0.778	-1.310	15.006	1.00	0.00
	ATOM	27	CA	ALA	6	-1.089	-1.294	14.028	1.00	14.14
35	ATOM	28	CB	ALA	6	-1.098	-2.784	14.300	1.00	16.49
	ATOM	29	C	ALA	6	-2.394	-0.721	14.540	1.00	16.09
	ATOM	30	O	ALA	6	-3.390	-0.608	13.844	1.00	21.55
	ATOM	31	N	HIS	7	-2.376	-0.363	15.806	1.00	17.76
	ATOM	32	H	HIS	7	-1.541	-0.482	16.284	1.00	0.00

	ATOM	33	CA	HIS	7	-3.533	0.171	16.488	1.00	16.60
	ATOM	34	CB	HIS	7	-3.352	-0.066	18.009	1.00	22.31
	ATOM	35	CG	HIS	7	-2.219	0.769	18.644	1.00	27.59
	ATOM	36	CD2	HIS	7	-2.489	1.750	19.576	1.00	28.93
5	ATOM	37	ND1	HIS	7	-0.885	0.783	18.461	1.00	25.24
	ATOM	38	HD1	HIS	7	-0.298	0.154	17.994	1.00	0.00
	ATOM	39	CE1	HIS	7	-0.376	1.717	19.227	1.00	28.14
	ATOM	40	NE2	HIS	7	-1.347	2.282	19.884	1.00	26.99
	ATOM	41	HE2	HIS	7	-1.204	2.905	20.638	1.00	0.00
10	ATOM	42	C	HIS	7	-3.741	1.658	16.209	1.00	13.37
	ATOM	43	O	HIS	7	-4.720	2.243	16.644	1.00	14.49
	ATOM	44	N	LEU	8	-2.817	2.341	15.557	1.00	10.78
	ATOM	45	H	LEU	8	-2.221	1.861	14.946	1.00	0.00
	ATOM	46	CA	LEU	8	-2.871	3.783	15.423	1.00	7.84
15	ATOM	47	CB	LEU	8	-1.436	4.278	15.161	1.00	6.56
	ATOM	48	CG	LEU	8	-0.575	4.915	16.234	1.00	3.50
	ATOM	49	CD1	LEU	8	-1.174	4.730	17.610	1.00	6.85
	ATOM	50	CD2	LEU	8	0.801	4.382	16.098	1.00	2.00
	ATOM	51	C	LEU	8	-3.808	4.079	14.265	1.00	8.93
20	ATOM	52	O	LEU	8	-3.580	3.600	13.154	1.00	10.23
	ATOM	53	N	PRO	9	-4.863	4.873	14.434	1.00	9.86
	ATOM	54	CD	PRO	9	-5.197	5.551	15.693	1.00	9.32
	ATOM	55	CA	PRO	9	-5.849	5.081	13.389	1.00	8.41
	ATOM	56	CB	PRO	9	-6.966	5.752	14.144	1.00	10.72
25	ATOM	57	CG	PRO	9	-6.309	6.490	15.289	1.00	11.80
	ATOM	58	C	PRO	9	-5.355	5.835	12.149	1.00	12.47
	ATOM	59	O	PRO	9	-6.026	5.867	11.110	1.00	18.23
	ATOM	60	N	PHE	10	-4.162	6.430	12.259	1.00	9.59
	ATOM	61	H	PHE	10	-3.692	6.342	13.107	1.00	0.00
30	ATOM	62	CA	PHE	10	-3.498	7.181	11.203	1.00	7.32
	ATOM	63	CB	PHE	10	-3.024	8.538	11.737	1.00	4.10
	ATOM	64	CG	PHE	10	-2.321	8.453	13.094	1.00	4.21
	ATOM	65	CD1	PHE	10	-0.943	8.232	13.179	1.00	4.43
	ATOM	66	CD2	PHE	10	-3.058	8.624	14.267	1.00	2.00
35	ATOM	67	CE1	PHE	10	-0.301	8.182	14.416	1.00	2.00
	ATOM	68	CE2	PHE	10	-2.417	8.580	15.500	1.00	2.51
	ATOM	69	CZ	PHE	10	-1.047	8.362	15.583	1.00	2.00
	ATOM	70	C	PHE	10	-2.294	6.405	10.696	1.00	7.70
	ATOM	71	O	PHE	10	-1.349	7.007	10.175	1.00	7.52

	ATOM	72	N	PHE	11	-2.224	5.088	10.921	1.00	6.80
	ATOM	73	H	PHE	11	-2.965	4.597	11.332	1.00	0.00
	ATOM	74	CA	PHE	11	-1.120	4.299	10.415	1.00	7.59
	ATOM	75	CB	PHE	11	-0.705	3.238	11.425	1.00	5.71
5	ATOM	76	CG	PHE	11	0.248	2.165	10.884	1.00	7.61
	ATOM	77	CD1	PHE	11	1.519	2.510	10.393	1.00	2.06
	ATOM	78	CD2	PHE	11	-0.165	0.821	10.874	1.00	2.94
	ATOM	79	CE1	PHE	11	2.370	1.522	9.895	1.00	2.00
	ATOM	80	CE2	PHE	11	0.700	-0.160	10.373	1.00	3.03
10	ATOM	81	CZ	PHE	11	1.962	0.191	9.888	1.00	4.25
	ATOM	82	C	PHE	11	-1.686	3.663	9.154	1.00	7.98
	ATOM	83	O	PHE	11	-2.784	3.126	9.188	1.00	9.38
	ATOM	84	N	TYR	12	-1.000	3.774	8.025	1.00	4.03
	ATOM	85	H	TYR	12	-0.170	4.294	8.022	1.00	0.00
15	ATOM	86	CA	TYR	12	-1.522	3.259	6.774	1.00	7.69
	ATOM	87	CB	TYR	12	-1.455	4.329	5.714	1.00	4.20
	ATOM	88	CG	TYR	12	-2.582	5.340	5.795	1.00	3.37
	ATOM	89	CD1	TYR	12	-2.543	6.332	6.766	1.00	2.00
	ATOM	90	CE1	TYR	12	-3.532	7.297	6.818	1.00	2.00
20	ATOM	91	CD2	TYR	12	-3.617	5.301	4.872	1.00	2.00
	ATOM	92	CE2	TYR	12	-4.609	6.269	4.918	1.00	3.76
	ATOM	93	CZ	TYR	12	-4.557	7.263	5.891	1.00	5.13
	ATOM	94	OH	TYR	12	-5.521	8.242	5.911	1.00	6.92
	ATOM	95	HH	TYR	12	-5.379	8.771	6.713	1.00	0.00
25	ATOM	96	C	TYR	12	-0.793	2.041	6.249	1.00	10.10
	ATOM	97	O	TYR	12	-1.154	1.494	5.206	1.00	10.16
	ATOM	98	N	GLY	13	0.290	1.623	6.899	1.00	4.96
	ATOM	99	H	GLY	13	0.676	2.192	7.592	1.00	0.00
	ATOM	100	CA	GLY	13	0.993	0.444	6.465	1.00	5.01
30	ATOM	101	C	GLY	13	1.962	0.782	5.361	1.00	9.03
	ATOM	102	O	GLY	13	2.466	1.911	5.324	1.00	9.88
	ATOM	103	N	SER	14	2.248	-0.181	4.484	1.00	6.75
	ATOM	104	H	SER	14	1.835	-1.069	4.566	1.00	0.00
	ATOM	105	CA	SER	14	3.216	-0.042	3.425	1.00	6.38
35	ATOM	106	CB	SER	14	3.761	-1.433	3.160	1.00	12.45
	ATOM	107	OG	SER	14	4.042	-2.137	4.368	1.00	14.84
	ATOM	108	HG	SER	14	4.988	-2.032	4.504	1.00	0.00
	ATOM	109	C	SER	14	2.646	0.592	2.163	1.00	9.03
	ATOM	110	O	SER	14	2.597	-0.003	1.083	1.00	6.91

	ATOM	111	N	ILE	15	2.120	1.812	2.312	1.00	12.05
	ATOM	112	H	ILE	15	2.188	2.238	3.193	1.00	0.00
	ATOM	113	CA	ILE	15	1.610	2.588	1.187	1.00	4.84
	ATOM	114	CB	ILE	15	0.538	3.627	1.605	1.00	6.22
5	ATOM	115	CG2	ILE	15	-0.680	2.860	2.116	1.00	2.00
	ATOM	116	CG1	ILE	15	1.075	4.612	2.629	1.00	4.45
	ATOM	117	CD	ILE	15	0.057	5.720	2.801	1.00	2.00
	ATOM	118	C	ILE	15	2.798	3.326	0.597	1.00	4.88
	ATOM	119	O	ILE	15	3.861	3.382	1.221	1.00	9.72
10	ATOM	120	N	SER	16	2.707	3.871	-0.603	1.00	2.18
	ATOM	121	H	SER	16	1.875	3.823	-1.116	1.00	0.00
	ATOM	122	CA	SER	16	3.788	4.641	-1.154	1.00	2.42
	ATOM	123	CB	SER	16	3.704	4.505	-2.673	1.00	8.87
	ATOM	124	OG	SER	16	2.388	4.754	-3.152	1.00	3.44
15	ATOM	125	HG	SER	16	2.047	3.891	-3.426	1.00	0.00
	ATOM	126	C	SER	16	3.687	6.106	-0.714	1.00	2.00
	ATOM	127	O	SER	16	2.675	6.502	-0.132	1.00	2.00
	ATOM	128	N	ARG	17	4.699	6.935	-0.968	1.00	2.93
	ATOM	129	H	ARG	17	5.537	6.524	-1.277	1.00	0.00
20	ATOM	130	CA	ARG	17	4.648	8.381	-0.757	1.00	7.56
	ATOM	131	CB	ARG	17	5.924	9.017	-1.273	1.00	6.05
	ATOM	132	CG	ARG	17	5.862	10.510	-1.338	1.00	5.21
	ATOM	133	CD	ARG	17	7.154	11.123	-1.775	1.00	3.35
	ATOM	134	NE	ARG	17	8.227	10.897	-0.825	1.00	4.91
25	ATOM	135	HE	ARG	17	8.208	10.065	-0.338	1.00	0.00
	ATOM	136	CZ	ARG	17	9.140	11.829	-0.522	1.00	4.06
	ATOM	137	NH1	ARG	17	9.090	13.040	-1.078	1.00	11.79
	ATOM	138	HH11	ARG	17	8.351	13.280	-1.704	1.00	0.00
	ATOM	139	HH12	ARG	17	9.767	13.730	-0.827	1.00	0.00
30	ATOM	140	NH2	ARG	17	10.160	11.543	0.279	1.00	2.00
	ATOM	141	HH21	ARG	17	10.267	10.623	0.648	1.00	0.00
	ATOM	142	HH22	ARG	17	10.826	12.246	0.515	1.00	0.00
	ATOM	143	C	ARG	17	3.467	9.007	-1.478	1.00	9.96
	ATOM	144	O	ARG	17	2.767	9.855	-0.912	1.00	18.22
35	ATOM	145	N	ALA	18	3.226	8.597	-2.725	1.00	8.79
	ATOM	146	H	ALA	18	3.866	7.978	-3.146	1.00	0.00
	ATOM	147	CA	ALA	18	2.127	9.126	-3.517	1.00	6.30
	ATOM	148	CB	ALA	18	2.157	8.565	-4.946	1.00	6.16
	ATOM	149	C	ALA	18	0.752	8.856	-2.957	1.00	6.92

	ATOM	150	O	ALA	18	-0.107	9.754	-2.973	1.00	7.53
	ATOM	151	N	GLU	19	0.506	7.652	-2.443	1.00	7.90
	ATOM	152	H	GLU	19	1.209	6.967	-2.446	1.00	0.00
	ATOM	153	CA	GLU	19	-0.782	7.381	-1.814	1.00	9.39
5	ATOM	154	CB	GLU	19	-0.933	5.916	-1.471	1.00	10.49
	ATOM	155	CG	GLU	19	-2.377	5.601	-1.128	1.00	19.14
	ATOM	156	CD	GLU	19	-2.645	4.173	-0.680	1.00	20.65
	ATOM	157	OE1	GLU	19	-3.479	3.996	0.201	1.00	17.14
	ATOM	158	OE2	GLU	19	-2.030	3.243	-1.201	1.00	24.68
10	ATOM	159	C	GLU	19	-0.919	8.177	-0.532	1.00	3.96
	ATOM	160	O	GLU	19	-2.017	8.678	-0.270	1.00	8.60
	ATOM	161	N	ALA	20	0.158	8.264	0.270	1.00	7.91
	ATOM	162	H	ALA	20	0.966	7.756	0.027	1.00	0.00
	ATOM	163	CA	ALA	20	0.211	9.052	1.508	1.00	5.76
15	ATOM	164	CB	ALA	20	1.649	9.038	2.045	1.00	2.00
	ATOM	165	C	ALA	20	-0.241	10.487	1.209	1.00	4.60
	ATOM	166	O	ALA	20	-1.206	10.973	1.808	1.00	5.16
	ATOM	167	N	GLU	21	0.379	11.097	0.190	1.00	4.13
	ATOM	168	H	GLU	21	1.116	10.617	-0.239	1.00	0.00
20	ATOM	169	CA	GLU	21	0.040	12.416	-0.312	1.00	2.10
	ATOM	170	CB	GLU	21	1.020	12.792	-1.412	1.00	4.68
	ATOM	171	CG	GLU	21	2.397	13.047	-0.773	1.00	2.00
	ATOM	172	CD	GLU	21	3.519	13.499	-1.669	1.00	2.00
	ATOM	173	OE1	GLU	21	4.557	13.853	-1.142	1.00	5.32
25	ATOM	174	OE2	GLU	21	3.407	13.490	-2.883	1.00	13.97
	ATOM	175	C	GLU	21	-1.380	12.520	-0.818	1.00	6.29
	ATOM	176	O	GLU	21	-2.019	13.528	-0.527	1.00	10.48
	ATOM	177	N	GLU	22	-1.962	11.533	-1.497	1.00	8.02
	ATOM	178	H	GLU	22	-1.426	10.751	-1.745	1.00	0.00
30	ATOM	179	CA	GLU	22	-3.372	11.572	-1.859	1.00	7.52
	ATOM	180	CB	GLU	22	-3.832	10.346	-2.661	1.00	7.05
	ATOM	181	CG	GLU	22	-3.392	10.345	-4.114	1.00	14.40
	ATOM	182	CD	GLU	22	-3.683	11.637	-4.867	1.00	8.48
	ATOM	183	OE1	GLU	22	-4.835	11.930	-5.138	1.00	9.34
35	ATOM	184	OE2	GLU	22	-2.752	12.353	-5.183	1.00	11.08
	ATOM	185	C	GLU	22	-4.273	11.631	-0.641	1.00	6.86
	ATOM	186	O	GLU	22	-5.253	12.378	-0.613	1.00	5.32
	ATOM	187	N	HIS	23	-3.959	10.856	0.392	1.00	5.94
	ATOM	188	H	HIS	23	-3.140	10.318	0.345	1.00	0.00

	ATOM	189	CA	HIS	23	-4.755	10.908	1.612	1.00	5.56
	ATOM	190	CB	HIS	23	-4.321	9.773	2.499	1.00	2.00
	ATOM	191	CG	HIS	23	-4.867	8.436	2.044	1.00	2.00
	ATOM	192	CD2	HIS	23	-6.203	8.130	1.947	1.00	2.00
5	ATOM	193	ND1	HIS	23	-4.188	7.361	1.687	1.00	3.99
	ATOM	194	HD1	HIS	23	-3.210	7.263	1.722	1.00	0.00
	ATOM	195	CE1	HIS	23	-5.036	6.418	1.389	1.00	4.29
	ATOM	196	NE2	HIS	23	-6.245	6.892	1.547	1.00	2.00
	ATOM	197	HE2	HIS	23	-7.054	6.418	1.246	1.00	0.00
10	ATOM	198	C	HIS	23	-4.635	12.252	2.349	1.00	4.09
	ATOM	199	O	HIS	23	-5.626	12.842	2.795	1.00	6.37
	ATOM	200	N	LEU	24	-3.421	12.790	2.458	1.00	3.53
	ATOM	201	H	LEU	24	-2.646	12.264	2.177	1.00	0.00
	ATOM	202	CA	LEU	24	-3.206	14.085	3.063	1.00	5.01
15	ATOM	203	CB	LEU	24	-1.701	14.303	3.096	1.00	2.00
	ATOM	204	CG	LEU	24	-0.823	14.200	4.370	1.00	6.54
	ATOM	205	CD1	LEU	24	-1.454	13.379	5.465	1.00	7.05
	ATOM	206	CD2	LEU	24	0.498	13.624	3.967	1.00	2.00
	ATOM	207	C	LEU	24	-3.973	15.138	2.252	1.00	11.01
20	ATOM	208	O	LEU	24	-4.652	15.982	2.852	1.00	10.63
	ATOM	209	N	LYS	25	-4.000	15.036	0.904	1.00	12.49
	ATOM	210	H	LYS	25	-3.462	14.341	0.474	1.00	0.00
	ATOM	211	CA	LYS	25	-4.774	15.932	0.043	1.00	7.14
	ATOM	212	CB	LYS	25	-4.496	15.670	-1.428	1.00	8.00
25	ATOM	213	CG	LYS	25	-3.153	16.255	-1.839	1.00	5.27
	ATOM	214	CD	LYS	25	-2.581	15.554	-3.051	1.00	3.30
	ATOM	215	CE	LYS	25	-3.260	15.890	-4.355	1.00	10.38
	ATOM	216	NZ	LYS	25	-2.559	15.231	-5.444	1.00	11.78
	ATOM	217	HZ1	LYS	25	-3.027	14.321	-5.634	1.00	0.00
30	ATOM	218	HZ2	LYS	25	-1.570	15.066	-5.169	1.00	0.00
	ATOM	219	HZ3	LYS	25	-2.588	15.821	-6.298	1.00	0.00
	ATOM	220	C	LYS	25	-6.265	15.828	0.258	1.00	10.22
	ATOM	221	O	LYS	25	-6.897	16.878	0.404	1.00	9.54
	ATOM	222	N	LEU	26	-6.838	14.617	0.301	1.00	11.16
35	ATOM	223	H	LEU	26	-6.273	13.839	0.106	1.00	0.00
	ATOM	224	CA	LEU	26	-8.251	14.406	0.623	1.00	9.37
	ATOM	225	CB	LEU	26	-8.620	12.933	0.400	1.00	11.52
	ATOM	226	CG	LEU	26	-8.869	12.403	-1.006	1.00	15.81
	ATOM	227	CD1	LEU	26	-8.667	10.906	-1.070	1.00	12.44

	ATOM	228	CD2	LEU	26	-10.274	12.781	-1.405	1.00	14.24
	ATOM	229	C	LEU	26	-8.631	14.799	2.069	1.00	10.95
	ATOM	230	O	LEU	26	-9.801	15.111	2.355	1.00	14.32
	ATOM	231	N	ALA	27	-7.692	14.822	3.024	1.00	11.08
5	ATOM	232	H	ALA	27	-6.777	14.533	2.808	1.00	0.00
	ATOM	233	CA	ALA	27	-7.994	15.224	4.386	1.00	11.08
	ATOM	234	CB	ALA	27	-7.036	14.511	5.304	1.00	10.64
	ATOM	235	C	ALA	27	-7.953	16.734	4.652	1.00	7.17
	ATOM	236	O	ALA	27	-8.111	17.181	5.782	1.00	11.67
10	ATOM	237	N	GLY	28	-7.739	17.589	3.664	1.00	12.48
	ATOM	238	H	GLY	28	-7.484	17.253	2.781	1.00	0.00
	ATOM	239	CA	GLY	28	-7.896	19.028	3.827	1.00	7.75
	ATOM	240	C	GLY	28	-6.628	19.840	3.923	1.00	4.07
	ATOM	241	O	GLY	28	-6.690	21.035	4.200	1.00	6.51
15	ATOM	242	N	MET	29	-5.473	19.214	3.803	1.00	2.00
	ATOM	243	H	MET	29	-5.490	18.237	3.712	1.00	0.00
	ATOM	244	CA	MET	29	-4.190	19.893	3.778	1.00	8.42
	ATOM	245	CB	MET	29	-3.995	20.563	2.387	1.00	10.20
	ATOM	246	CG	MET	29	-3.777	19.617	1.225	1.00	2.00
20	ATOM	247	SD	MET	29	-2.291	18.598	1.382	1.00	8.85
	ATOM	248	CE	MET	29	-1.010	19.682	0.859	1.00	2.00
	ATOM	249	C	MET	29	-3.856	20.922	4.854	1.00	10.87
	ATOM	250	O	MET	29	-2.966	21.768	4.665	1.00	10.88
	ATOM	251	N	ALA	30	-4.500	20.905	6.021	1.00	11.57
25	ATOM	252	H	ALA	30	-5.182	20.223	6.167	1.00	0.00
	ATOM	253	CA	ALA	30	-4.164	21.845	7.095	1.00	10.40
	ATOM	254	CB	ALA	30	-5.179	21.738	8.228	1.00	6.30
	ATOM	255	C	ALA	30	-2.775	21.578	7.669	1.00	10.33
	ATOM	256	O	ALA	30	-2.295	20.435	7.630	1.00	13.22
30	ATOM	257	N	ASP	31	-2.076	22.614	8.163	1.00	12.01
	ATOM	258	H	ASP	31	-2.486	23.499	8.124	1.00	0.00
	ATOM	259	CA	ASP	31	-0.776	22.454	8.823	1.00	12.46
	ATOM	260	CB	ASP	31	-0.288	23.751	9.448	1.00	13.37
	ATOM	261	CG	ASP	31	0.098	24.844	8.474	1.00	21.50
35	ATOM	262	OD1	ASP	31	0.146	25.992	8.888	1.00	24.55
	ATOM	263	OD2	ASP	31	0.365	24.563	7.309	1.00	20.09
	ATOM	264	C	ASP	31	-0.900	21.447	9.952	1.00	7.22
	ATOM	265	O	ASP	31	-1.895	21.484	10.668	1.00	4.46
	ATOM	266	N	GLY	32	0.048	20.550	10.124	1.00	10.27

	ATOM	267	H	GLY	32	0.798	20.509	9.504	1.00	0.00
	ATOM	268	CA	GLY	32	-0.033	19.590	11.205	1.00	8.51
	ATOM	269	C	GLY	32	-0.823	18.338	10.859	1.00	7.26
	ATOM	270	O	GLY	32	-0.854	17.457	11.714	1.00	8.25
5	ATOM	271	N	LEU	33	-1.475	18.224	9.681	1.00	11.32
	ATOM	272	H	LEU	33	-1.447	18.977	9.055	1.00	0.00
	ATOM	273	CA	LEU	33	-2.163	17.020	9.241	1.00	7.48
	ATOM	274	CB	LEU	33	-2.958	17.285	7.952	1.00	6.35
	ATOM	275	CG	LEU	33	-3.782	16.168	7.277	1.00	6.57
10	ATOM	276	CD1	LEU	33	-5.026	15.832	8.081	1.00	2.00
	ATOM	277	CD2	LEU	33	-4.230	16.632	5.924	1.00	2.00
	ATOM	278	C	LEU	33	-1.040	16.019	8.975	1.00	6.22
	ATOM	279	O	LEU	33	-0.088	16.324	8.255	1.00	6.43
	ATOM	280	N	PHE	34	-1.096	14.827	9.559	1.00	8.18
15	ATOM	281	H	PHE	34	-1.873	14.606	10.113	1.00	0.00
	ATOM	282	CA	PHE	34	-0.031	13.841	9.449	1.00	6.96
	ATOM	283	CB	PHE	34	0.906	13.955	10.668	1.00	9.24
	ATOM	284	CG	PHE	34	0.293	13.474	12.001	1.00	11.41
	ATOM	285	CD1	PHE	34	0.609	12.195	12.511	1.00	10.54
20	ATOM	286	CD2	PHE	34	-0.598	14.301	12.705	1.00	6.42
	ATOM	287	CE1	PHE	34	0.036	11.755	13.703	1.00	2.02
	ATOM	288	CE2	PHE	34	-1.171	13.850	13.902	1.00	7.27
	ATOM	289	CZ	PHE	34	-0.851	12.578	14.396	1.00	6.84
	ATOM	290	C	PHE	34	-0.567	12.412	9.374	1.00	5.22
25	ATOM	291	O	PHE	34	-1.726	12.147	9.661	1.00	3.39
	ATOM	292	N	LEU	35	0.268	11.458	9.034	1.00	5.72
	ATOM	293	H	LEU	35	1.189	11.706	8.790	1.00	0.00
	ATOM	294	CA	LEU	35	-0.072	10.050	9.046	1.00	4.60
	ATOM	295	CB	LEU	35	-0.724	9.614	7.712	1.00	8.73
30	ATOM	296	CG	LEU	35	-0.088	9.773	6.319	1.00	3.40
	ATOM	297	CD1	LEU	35	0.959	8.732	5.950	1.00	2.00
	ATOM	298	CD2	LEU	35	-1.244	9.677	5.386	1.00	2.00
	ATOM	299	C	LEU	35	1.245	9.317	9.250	1.00	3.92
	ATOM	300	O	LEU	35	2.324	9.933	9.225	1.00	2.00
35	ATOM	301	N	LEU	36	1.191	8.005	9.422	1.00	5.92
	ATOM	302	H	LEU	36	0.323	7.551	9.390	1.00	0.00
	ATOM	303	CA	LEU	36	2.380	7.184	9.594	1.00	8.39
	ATOM	304	CB	LEU	36	2.363	6.596	10.986	1.00	11.32
	ATOM	305	CG	LEU	36	3.640	6.400	11.741	1.00	14.05

	ATOM	306	CD1	LEU	36	4.436	7.705	11.802	1.00	16.00
	ATOM	307	CD2	LEU	36	3.265	5.884	13.125	1.00	9.12
	ATOM	308	C	LEU	36	2.337	6.074	8.546	1.00	7.14
	ATOM	309	O	LEU	36	1.281	5.554	8.193	1.00	5.23
5	ATOM	310	N	ARG	37	3.451	5.641	8.002	1.00	7.21
	ATOM	311	H	ARG	37	4.319	6.012	8.281	1.00	0.00
	ATOM	312	CA	ARG	37	3.436	4.601	7.001	1.00	6.63
	ATOM	313	CB	ARG	37	3.347	5.207	5.570	1.00	6.99
	ATOM	314	CG	ARG	37	4.431	6.217	5.175	1.00	7.51
10	ATOM	315	CD	ARG	37	4.133	6.877	3.834	1.00	3.14
	ATOM	316	NE	ARG	37	4.999	7.996	3.521	1.00	2.00
	ATOM	317	HE	ARG	37	4.751	8.885	3.842	1.00	0.00
	ATOM	318	CZ	ARG	37	6.090	7.884	2.784	1.00	2.00
	ATOM	319	NH1	ARG	37	6.467	6.714	2.287	1.00	9.05
15	ATOM	320	HH11	ARG	37	5.927	5.895	2.467	1.00	0.00
	ATOM	321	HH12	ARG	37	7.293	6.655	1.729	1.00	0.00
	ATOM	322	NH2	ARG	37	6.826	8.967	2.509	1.00	2.00
	ATOM	323	HH21	ARG	37	6.527	9.860	2.843	1.00	0.00
	ATOM	324	HH22	ARG	37	7.645	8.898	1.946	1.00	0.00
20	ATOM	325	C	ARG	37	4.742	3.896	7.236	1.00	4.63
	ATOM	326	O	ARG	37	5.673	4.451	7.813	1.00	6.35
	ATOM	327	N	GLN	38	4.774	2.634	6.860	1.00	5.04
	ATOM	328	H	GLN	38	4.022	2.306	6.330	1.00	0.00
	ATOM	329	CA	GLN	38	5.938	1.799	7.031	1.00	7.58
25	ATOM	330	CB	GLN	38	5.595	0.351	6.761	1.00	7.74
	ATOM	331	CG	GLN	38	6.806	-0.558	6.935	1.00	13.64
	ATOM	332	CD	GLN	38	6.483	-2.001	6.637	1.00	14.53
	ATOM	333	OE1	GLN	38	6.523	-2.458	5.497	1.00	12.05
	ATOM	334	NE2	GLN	38	6.109	-2.747	7.656	1.00	18.12
30	ATOM	335	HE21	GLN	38	6.074	-2.344	8.548	1.00	0.00
	ATOM	336	HE22	GLN	38	5.914	-3.686	7.478	1.00	0.00
	ATOM	337	C	GLN	38	6.999	2.228	6.044	1.00	10.26
	ATOM	338	O	GLN	38	6.685	2.463	4.877	1.00	17.97
	ATOM	339	N	CYS	39	8.249	2.259	6.487	1.00	5.47
35	ATOM	340	H	CYS	39	8.430	1.978	7.409	1.00	0.00
	ATOM	341	CA	CYS	39	9.348	2.636	5.640	1.00	5.68
	ATOM	342	CB	CYS	39	10.486	3.061	6.507	1.00	2.00
	ATOM	343	SG	CYS	39	11.920	3.657	5.614	1.00	7.85
	ATOM	344	C	CYS	39	9.677	1.390	4.861	1.00	8.60

	ATOM	345	O	CYS	39	9.841	0.306	5.419	1.00	7.46
	ATOM	346	N	LEU	40	9.732	1.534	3.551	1.00	9.77
	ATOM	347	H	LEU	40	9.503	2.417	3.173	1.00	0.00
	ATOM	348	CA	LEU	40	10.016	0.439	2.642	1.00	8.59
5	ATOM	349	CB	LEU	40	9.288	0.734	1.312	1.00	6.71
	ATOM	350	CG	LEU	40	7.773	1.006	1.449	1.00	11.30
	ATOM	351	CD1	LEU	40	7.122	1.289	0.101	1.00	8.08
	ATOM	352	CD2	LEU	40	7.140	-0.199	2.108	1.00	11.61
	ATOM	353	C	LEU	40	11.509	0.271	2.441	1.00	5.73
10	ATOM	354	O	LEU	40	11.937	-0.688	1.800	1.00	9.26
	ATOM	355	N	ARG	41	12.309	1.209	2.962	1.00	8.34
	ATOM	356	H	ARG	41	11.897	1.977	3.405	1.00	0.00
	ATOM	357	CA	ARG	41	13.763	1.249	2.813	1.00	2.90
	ATOM	358	CB	ARG	41	14.210	2.666	2.555	1.00	2.00
15	ATOM	359	CG	ARG	41	13.454	3.361	1.465	1.00	2.98
	ATOM	360	CD	ARG	41	13.444	4.854	1.636	1.00	2.00
	ATOM	361	NE	ARG	41	14.799	5.288	1.685	1.00	8.56
	ATOM	362	HE	ARG	41	15.451	4.892	1.068	1.00	0.00
	ATOM	363	CZ	ARG	41	15.236	6.186	2.575	1.00	12.54
20	ATOM	364	NH1	ARG	41	14.464	6.783	3.503	1.00	5.62
	ATOM	365	HH11	ARG	41	13.491	6.577	3.561	1.00	0.00
	ATOM	366	HH12	ARG	41	14.875	7.443	4.131	1.00	0.00
	ATOM	367	NH2	ARG	41	16.541	6.418	2.555	1.00	9.56
	ATOM	368	HH21	ARG	41	17.122	5.945	1.892	1.00	0.00
25	ATOM	369	HH22	ARG	41	16.939	7.080	3.189	1.00	0.00
	ATOM	370	C	ARG	41	14.546	0.749	4.026	1.00	3.10
	ATOM	371	O	ARG	41	15.738	0.442	3.924	1.00	6.59
	ATOM	372	N	SER	42	13.886	0.603	5.172	1.00	6.64
	ATOM	373	H	SER	42	12.914	0.695	5.186	1.00	0.00
30	ATOM	374	CA	SER	42	14.523	0.260	6.436	1.00	10.06
	ATOM	375	CB	SER	42	14.450	1.447	7.379	1.00	7.22
	ATOM	376	OG	SER	42	15.317	2.451	6.893	1.00	18.52
	ATOM	377	HG	SER	42	15.130	3.248	7.414	1.00	0.00
	ATOM	378	C	SER	42	13.877	-0.927	7.130	1.00	13.90
35	ATOM	379	O	SER	42	12.722	-1.258	6.862	1.00	18.52
	ATOM	380	N	LEU	43	14.615	-1.614	7.985	1.00	14.21
	ATOM	381	H	LEU	43	15.551	-1.367	8.099	1.00	0.00
	ATOM	382	CA	LEU	43	14.096	-2.659	8.842	1.00	12.11
	ATOM	383	CB	LEU	43	15.245	-3.504	9.359	1.00	12.29

	ATOM	384	CG	LEU	43	15.525	-4.925	8.908	1.00	14.37
	ATOM	385	CD1	LEU	43	14.425	-5.442	7.984	1.00	15.27
	ATOM	386	CD2	LEU	43	16.915	-4.921	8.302	1.00	3.04
	ATOM	387	C	LEU	43	13.405	-1.982	10.027	1.00	11.13
5	ATOM	388	O	LEU	43	14.057	-1.224	10.754	1.00	10.97
	ATOM	389	N	GLY	44	12.099	-2.164	10.184	1.00	7.84
	ATOM	390	H	GLY	44	11.625	-2.683	9.498	1.00	0.00
	ATOM	391	CA	GLY	44	11.327	-1.661	11.321	1.00	11.90
	ATOM	392	C	GLY	44	11.099	-0.147	11.447	1.00	14.98
10	ATOM	393	O	GLY	44	10.677	0.352	12.508	1.00	9.21
	ATOM	394	N	GLY	45	11.279	0.615	10.380	1.00	14.81
	ATOM	395	H	GLY	45	11.397	0.182	9.512	1.00	0.00
	ATOM	396	CA	GLY	45	11.122	2.047	10.463	1.00	9.74
	ATOM	397	C	GLY	45	9.769	2.464	9.936	1.00	8.20
15	ATOM	398	O	GLY	45	8.978	1.687	9.395	1.00	6.62
	ATOM	399	N	TYR	46	9.511	3.752	10.057	1.00	9.51
	ATOM	400	H	TYR	46	10.194	4.332	10.458	1.00	0.00
	ATOM	401	CA	TYR	46	8.295	4.356	9.555	1.00	4.24
	ATOM	402	CB	TYR	46	7.347	4.752	10.689	1.00	2.68
20	ATOM	403	CG	TYR	46	6.921	3.588	11.564	1.00	8.82
	ATOM	404	CD1	TYR	46	5.812	2.830	11.220	1.00	2.00
	ATOM	405	CE1	TYR	46	5.463	1.728	11.982	1.00	7.74
	ATOM	406	CD2	TYR	46	7.684	3.255	12.684	1.00	6.02
	ATOM	407	CE2	TYR	46	7.343	2.147	13.453	1.00	11.00
25	ATOM	408	CZ	TYR	46	6.233	1.388	13.092	1.00	10.98
	ATOM	409	OH	TYR	46	5.905	0.267	13.825	1.00	8.20
	ATOM	410	HH	TYR	46	6.725	-0.036	14.250	1.00	0.00
	ATOM	411	C	TYR	46	8.678	5.610	8.796	1.00	2.66
	ATOM	412	O	TYR	46	9.856	5.975	8.722	1.00	2.00
30	ATOM	413	N	VAL	47	7.691	6.266	8.217	1.00	2.00
	ATOM	414	H	VAL	47	6.772	5.925	8.251	1.00	0.00
	ATOM	415	CA	VAL	47	7.906	7.564	7.655	1.00	3.35
	ATOM	416	CB	VAL	47	7.904	7.582	6.088	1.00	4.68
	ATOM	417	CG1	VAL	47	8.233	9.004	5.674	1.00	2.00
35	ATOM	418	CG2	VAL	47	8.969	6.694	5.445	1.00	2.00
	ATOM	419	C	VAL	47	6.702	8.327	8.198	1.00	5.16
	ATOM	420	O	VAL	47	5.560	7.842	8.202	1.00	2.00
	ATOM	421	N	LEU	48	7.015	9.505	8.772	1.00	8.17
	ATOM	422	H	LEU	48	7.954	9.773	8.830	1.00	0.00

	ATOM	423	CA	LEU	48	6.001	10.432	9.273	1.00	6.70
	ATOM	424	CB	LEU	48	6.544	11.178	10.506	1.00	3.33
	ATOM	425	CG	LEU	48	5.855	12.460	11.014	1.00	10.59
	ATOM	426	CD1	LEU	48	4.443	12.184	11.481	1.00	2.00
5	ATOM	427	CD2	LEU	48	6.688	13.032	12.151	1.00	10.81
	ATOM	428	C	LEU	48	5.732	11.393	8.125	1.00	2.00
	ATOM	429	O	LEU	48	6.652	12.078	7.681	1.00	2.00
	ATOM	430	N	SER	49	4.518	11.432	7.592	1.00	5.52
	ATOM	431	H	SER	49	3.795	10.929	8.028	1.00	0.00
10	ATOM	432	CA	SER	49	4.204	12.312	6.464	1.00	7.99
	ATOM	433	CB	SER	49	3.533	11.538	5.339	1.00	5.20
	ATOM	434	OG	SER	49	4.472	10.608	4.804	1.00	4.26
	ATOM	435	HG	SER	49	4.258	9.763	5.230	1.00	0.00
	ATOM	436	C	SER	49	3.279	13.402	6.946	1.00	4.36
15	ATOM	437	O	SER	49	2.207	13.129	7.476	1.00	2.46
	ATOM	438	N	LEU	50	3.692	14.646	6.740	1.00	11.49
	ATOM	439	H	LEU	50	4.500	14.827	6.218	1.00	0.00
	ATOM	440	CA	LEU	50	2.981	15.773	7.301	1.00	10.89
	ATOM	441	CB	LEU	50	3.736	16.081	8.614	1.00	13.17
20	ATOM	442	CG	LEU	50	4.269	17.435	9.006	1.00	11.02
	ATOM	443	CD1	LEU	50	3.244	18.149	9.876	1.00	15.66
	ATOM	444	CD2	LEU	50	5.557	17.249	9.743	1.00	10.25
	ATOM	445	C	LEU	50	2.862	16.965	6.360	1.00	5.13
	ATOM	446	O	LEU	50	3.736	17.222	5.517	1.00	5.58
25	ATOM	447	N	VAL	51	1.734	17.659	6.517	1.00	5.20
	ATOM	448	H	VAL	51	1.077	17.332	7.162	1.00	0.00
	ATOM	449	CA	VAL	51	1.444	18.873	5.778	1.00	6.94
	ATOM	450	CB	VAL	51	-0.037	18.938	5.369	1.00	5.57
	ATOM	451	CG1	VAL	51	-0.313	20.171	4.539	1.00	5.27
30	ATOM	452	CG2	VAL	51	-0.363	17.755	4.502	1.00	8.48
	ATOM	453	C	VAL	51	1.767	20.115	6.605	1.00	6.19
	ATOM	454	O	VAL	51	1.419	20.266	7.779	1.00	6.38
	ATOM	455	N	HIS	52	2.496	21.014	5.956	1.00	7.67
	ATOM	456	H	HIS	52	2.779	20.789	5.041	1.00	0.00
35	ATOM	457	CA	HIS	52	2.805	22.326	6.469	1.00	5.57
	ATOM	458	CB	HIS	52	4.074	22.315	7.320	1.00	4.68
	ATOM	459	CG	HIS	52	4.302	23.714	7.897	1.00	2.00
	ATOM	460	CD2	HIS	52	5.319	24.547	7.535	1.00	5.06
	ATOM	461	ND1	HIS	52	3.552	24.372	8.768	1.00	6.19

	ATOM	462	HD1	HIS	52	2.809	24.027	9.315	1.00	0.00
	ATOM	463	CE1	HIS	52	4.076	25.555	8.929	1.00	2.82
	ATOM	464	NE2	HIS	52	5.135	25.652	8.189	1.00	2.00
	ATOM	465	HE2	HIS	52	5.832	26.325	8.378	1.00	0.00
5	ATOM	466	C	HIS	52	3.011	23.224	5.233	1.00	6.14
	ATOM	467	O	HIS	52	3.752	22.848	4.326	1.00	7.03
	ATOM	468	N	ASP	53	2.344	24.398	5.203	1.00	7.04
	ATOM	469	H	ASP	53	1.756	24.593	5.946	1.00	0.00
	ATOM	470	CA	ASP	53	2.319	25.378	4.128	1.00	7.19
10	ATOM	471	CB	ASP	53	3.692	26.074	4.077	1.00	13.83
	ATOM	472	CG	ASP	53	3.782	27.331	3.203	1.00	19.58
	ATOM	473	OD1	ASP	53	4.872	27.597	2.695	1.00	24.03
	ATOM	474	OD2	ASP	53	2.790	28.048	3.030	1.00	20.95
	ATOM	475	C	ASP	53	1.944	24.749	2.783	1.00	7.16
15	ATOM	476	O	ASP	53	2.571	24.963	1.752	1.00	4.53
	ATOM	477	N	VAL	54	0.844	23.980	2.869	1.00	8.53
	ATOM	478	H	VAL	54	0.390	23.945	3.737	1.00	0.00
	ATOM	479	CA	VAL	54	0.204	23.208	1.800	1.00	8.93
	ATOM	480	CB	VAL	54	-0.627	24.166	0.849	1.00	12.04
20	ATOM	481	CG1	VAL	54	-1.678	23.357	0.060	1.00	7.47
	ATOM	482	CG2	VAL	54	-1.419	25.201	1.664	1.00	8.15
	ATOM	483	C	VAL	54	1.224	22.395	1.006	1.00	9.82
	ATOM	484	O	VAL	54	1.087	22.119	-0.185	1.00	9.21
	ATOM	485	N	ARG	55	2.250	21.903	1.704	1.00	8.33
25	ATOM	486	H	ARG	55	2.287	22.011	2.677	1.00	0.00
	ATOM	487	CA	ARG	55	3.322	21.141	1.094	1.00	9.23
	ATOM	488	CB	ARG	55	4.611	21.966	1.055	1.00	6.97
	ATOM	489	CG	ARG	55	4.532	23.059	0.020	1.00	10.44
	ATOM	490	CD	ARG	55	5.795	23.872	0.061	1.00	12.13
30	ATOM	491	NE	ARG	55	5.926	24.706	-1.136	1.00	18.61
	ATOM	492	HE	ARG	55	6.452	24.356	-1.888	1.00	0.00
	ATOM	493	CZ	ARG	55	5.350	25.913	-1.280	1.00	15.59
	ATOM	494	NH1	ARG	55	4.586	26.464	-0.336	1.00	10.00
	ATOM	495	HH11	ARG	55	4.408	25.984	0.524	1.00	0.00
35	ATOM	496	HH12	ARG	55	4.189	27.367	-0.490	1.00	0.00
	ATOM	497	NH2	ARG	55	5.584	26.607	-2.390	1.00	14.76
	ATOM	498	HH21	ARG	55	6.170	26.232	-3.108	1.00	0.00
	ATOM	499	HH22	ARG	55	5.161	27.505	-2.516	1.00	0.00
	ATOM	500	C	ARG	55	3.524	19.911	1.961	1.00	9.89

	ATOM	501	O	ARG	55	3.145	19.914	3.136	1.00	7.57
	ATOM	502	N	PHE	56	4.170	18.888	1.414	1.00	11.16
	ATOM	503	H	PHE	56	4.544	18.997	0.510	1.00	0.00
	ATOM	504	CA	PHE	56	4.340	17.617	2.096	1.00	10.07
5	ATOM	505	CB	PHE	56	4.098	16.469	1.151	1.00	10.65
	ATOM	506	CG	PHE	56	2.742	16.558	0.505	1.00	5.39
	ATOM	507	CD1	PHE	56	2.644	16.978	-0.820	1.00	7.49
	ATOM	508	CD2	PHE	56	1.625	16.180	1.224	1.00	2.00
	ATOM	509	CE1	PHE	56	1.397	17.010	-1.440	1.00	2.00
10	ATOM	510	CE2	PHE	56	0.387	16.217	0.593	1.00	4.37
	ATOM	511	CZ	PHE	56	0.271	16.629	-0.735	1.00	3.23
	ATOM	512	C	PHE	56	5.720	17.453	2.654	1.00	7.33
	ATOM	513	O	PHE	56	6.669	17.846	1.989	1.00	3.76
	ATOM	514	N	HIS	57	5.911	16.893	3.847	1.00	7.78
15	ATOM	515	H	HIS	57	5.145	16.575	4.376	1.00	0.00
	ATOM	516	CA	HIS	57	7.243	16.753	4.422	1.00	9.13
	ATOM	517	CB	HIS	57	7.410	17.781	5.554	1.00	9.13
	ATOM	518	CG	HIS	57	7.101	19.214	5.116	1.00	5.87
	ATOM	519	CD2	HIS	57	5.851	19.759	5.157	1.00	4.86
20	ATOM	520	ND1	HIS	57	7.905	20.137	4.602	1.00	5.61
	ATOM	521	HD1	HIS	57	8.788	19.977	4.213	1.00	0.00
	ATOM	522	CE1	HIS	57	7.208	21.202	4.328	1.00	2.00
	ATOM	523	NE2	HIS	57	5.978	20.952	4.666	1.00	8.92
	ATOM	524	HE2	HIS	57	5.233	21.552	4.438	1.00	0.00
25	ATOM	525	C	HIS	57	7.295	15.330	4.945	1.00	7.66
	ATOM	526	O	HIS	57	6.364	14.882	5.611	1.00	11.39
	ATOM	527	N	HIS	58	8.296	14.567	4.535	1.00	9.95
	ATOM	528	H	HIS	58	9.012	14.961	3.981	1.00	0.00
	ATOM	529	CA	HIS	58	8.411	13.173	4.887	1.00	7.60
30	ATOM	530	CB	HIS	58	8.491	12.344	3.620	1.00	3.50
	ATOM	531	CG	HIS	58	7.195	12.474	2.834	1.00	2.00
	ATOM	532	CD2	HIS	58	7.013	13.360	1.813	1.00	2.00
	ATOM	533	ND1	HIS	58	6.051	11.828	2.960	1.00	4.99
	ATOM	534	HD1	HIS	58	5.844	11.123	3.619	1.00	0.00
35	ATOM	535	CE1	HIS	58	5.196	12.273	2.087	1.00	2.00
	ATOM	536	NE2	HIS	58	5.794	13.197	1.403	1.00	2.00
	ATOM	537	HE2	HIS	58	5.390	13.727	0.691	1.00	0.00
	ATOM	538	C	HIS	58	9.639	12.966	5.731	1.00	7.66
	ATOM	539	O	HIS	58	10.756	13.187	5.271	1.00	6.10

	ATOM	540	N	PHE	59	9.418	12.580	6.985	1.00	4.13
	ATOM	541	H	PHE	59	8.490	12.492	7.283	1.00	0.00
	ATOM	542	CA	PHE	59	10.476	12.333	7.958	1.00	5.36
	ATOM	543	CB	PHE	59	10.097	13.014	9.295	1.00	5.09
5	ATOM	544	CG	PHE	59	10.111	14.519	9.155	1.00	2.00
	ATOM	545	CD1	PHE	59	8.934	15.206	8.879	1.00	2.00
	ATOM	546	CD2	PHE	59	11.332	15.182	9.253	1.00	3.34
	ATOM	547	CE1	PHE	59	8.987	16.571	8.688	1.00	8.91
	ATOM	548	CE2	PHE	59	11.371	16.549	9.060	1.00	2.00
10	ATOM	549	CZ	PHE	59	10.203	17.246	8.780	1.00	2.00
	ATOM	550	C	PHE	59	10.707	10.846	8.189	1.00	3.82
	ATOM	551	O	PHE	59	9.802	10.183	8.724	1.00	4.17
	ATOM	552	N	PRO	60	11.822	10.239	7.802	1.00	4.66
	ATOM	553	CD	PRO	60	12.871	10.838	6.989	1.00	7.48
15	ATOM	554	CA	PRO	60	12.139	8.867	8.165	1.00	6.70
	ATOM	555	CB	PRO	60	13.388	8.558	7.392	1.00	4.95
	ATOM	556	CG	PRO	60	13.453	9.621	6.300	1.00	5.79
	ATOM	557	C	PRO	60	12.313	8.715	9.672	1.00	10.66
	ATOM	558	O	PRO	60	12.935	9.532	10.350	1.00	8.35
20	ATOM	559	N	ILE	61	11.681	7.687	10.217	1.00	11.15
	ATOM	560	H	ILE	61	11.116	7.128	9.646	1.00	0.00
	ATOM	561	CA	ILE	61	11.807	7.337	11.621	1.00	7.78
	ATOM	562	CB	ILE	61	10.408	7.155	12.247	1.00	6.02
	ATOM	563	CG2	ILE	61	10.620	6.819	13.710	1.00	4.07
25	ATOM	564	CG1	ILE	61	9.524	8.398	12.103	1.00	4.03
	ATOM	565	CD	ILE	61	8.035	8.155	12.396	1.00	2.00
	ATOM	566	C	ILE	61	12.563	6.013	11.574	1.00	8.52
	ATOM	567	O	ILE	61	12.018	5.034	11.047	1.00	9.02
	ATOM	568	N	GLU	62	13.816	5.975	12.022	1.00	9.62
30	ATOM	569	H	GLU	62	14.202	6.797	12.395	1.00	0.00
	ATOM	570	CA	GLU	62	14.612	4.756	12.035	1.00	8.61
	ATOM	571	CB	GLU	62	16.077	5.015	11.900	1.00	8.30
	ATOM	572	CG	GLU	62	16.575	5.629	10.615	1.00	29.69
	ATOM	573	CD	GLU	62	18.027	6.097	10.749	1.00	43.17
35	ATOM	574	OE1	GLU	62	18.878	5.304	11.173	1.00	46.59
	ATOM	575	OE2	GLU	62	18.305	7.262	10.441	1.00	47.06
	ATOM	576	C	GLU	62	14.464	4.023	13.348	1.00	9.33
	ATOM	577	O	GLU	62	14.321	4.691	14.365	1.00	11.22
	ATOM	578	N	ARG	63	14.460	2.698	13.370	1.00	9.50

	ATOM	579	H	ARG	63	14.448	2.228	12.514	1.00	0.00
	ATOM	580	CA	ARG	63	14.508	1.918	14.597	1.00	11.99
	ATOM	581	CB	ARG	63	13.851	0.583	14.339	1.00	16.38
	ATOM	582	CG	ARG	63	13.612	-0.203	15.604	1.00	20.52
5	ATOM	583	CD	ARG	63	12.825	-1.422	15.224	1.00	27.53
	ATOM	584	NE	ARG	63	12.614	-2.334	16.332	1.00	36.69
	ATOM	585	HE	ARG	63	11.709	-2.419	16.697	1.00	0.00
	ATOM	586	CZ	ARG	63	13.596	-3.072	16.878	1.00	39.35
	ATOM	587	NH1	ARG	63	14.864	-3.031	16.463	1.00	42.71
10	ATOM	588	HH11	ARG	63	15.125	-2.426	15.711	1.00	0.00
	ATOM	589	HH12	ARG	63	15.553	-3.603	16.909	1.00	0.00
	ATOM	590	NH2	ARG	63	13.293	-3.916	17.858	1.00	41.76
	ATOM	591	HH21	ARG	63	12.349	-3.985	18.185	1.00	0.00
	ATOM	592	HH22	ARG	63	14.009	-4.480	18.269	1.00	0.00
15	ATOM	593	C	ARG	63	15.992	1.760	14.998	1.00	14.55
	ATOM	594	O	ARG	63	16.882	1.405	14.210	1.00	15.00
	ATOM	595	N	GLN	64	16.312	2.083	16.247	1.00	13.04
	ATOM	596	H	GLN	64	15.586	2.240	16.876	1.00	0.00
	ATOM	597	CA	GLN	64	17.692	2.150	16.724	1.00	14.92
20	ATOM	598	CB	GLN	64	17.809	3.120	17.901	1.00	13.12
	ATOM	599	CG	GLN	64	17.253	4.507	17.632	1.00	20.26
	ATOM	600	CD	GLN	64	18.029	5.265	16.569	1.00	26.72
	ATOM	601	OE1	GLN	64	17.579	5.524	15.453	1.00	32.53
	ATOM	602	NE2	GLN	64	19.246	5.681	16.873	1.00	31.43
25	ATOM	603	HE21	GLN	64	19.593	5.484	17.766	1.00	0.00
	ATOM	604	HE22	GLN	64	19.721	6.197	16.189	1.00	0.00
	ATOM	605	C	GLN	64	18.196	0.803	17.200	1.00	14.42
	ATOM	606	O	GLN	64	17.384	-0.097	17.379	1.00	15.52
	ATOM	607	N	LEU	65	19.498	0.702	17.519	1.00	19.29
30	ATOM	608	H	LEU	65	20.086	1.426	17.230	1.00	0.00
	ATOM	609	CA	LEU	65	20.112	-0.477	18.145	1.00	22.45
	ATOM	610	CB	LEU	65	21.589	-0.172	18.629	1.00	28.25
	ATOM	611	CG	LEU	65	22.134	0.937	19.638	1.00	36.97
	ATOM	612	CD1	LEU	65	21.972	0.566	21.105	1.00	35.85
35	ATOM	613	CD2	LEU	65	23.666	1.012	19.553	1.00	31.59
	ATOM	614	C	LEU	65	19.306	-0.988	19.337	1.00	19.74
	ATOM	615	O	LEU	65	19.098	-2.185	19.514	1.00	22.52
	ATOM	616	N	ASN	66	18.737	-0.082	20.122	1.00	16.94
	ATOM	617	H	ASN	66	18.751	0.854	19.850	1.00	0.00

	ATOM	618	CA	ASN	66	18.035	-0.443	21.344	1.00	14.28
	ATOM	619	CB	ASN	66	18.407	0.567	22.433	1.00	17.49
	ATOM	620	CG	ASN	66	18.149	2.027	22.091	1.00	18.94
	ATOM	621	OD1	ASN	66	17.411	2.357	21.159	1.00	20.48
5	ATOM	622	ND2	ASN	66	18.776	2.964	22.771	1.00	26.84
	ATOM	623	HD21	ASN	66	19.427	2.694	23.459	1.00	0.00
	ATOM	624	HD22	ASN	66	18.577	3.906	22.593	1.00	0.00
	ATOM	625	C	ASN	66	16.531	-0.557	21.223	1.00	13.50
	ATOM	626	O	ASN	66	15.822	-0.693	22.219	1.00	11.14
10	ATOM	627	N	GLY	67	16.013	-0.514	19.997	1.00	10.89
	ATOM	628	H	GLY	67	16.594	-0.368	19.219	1.00	0.00
	ATOM	629	CA	GLY	67	14.604	-0.731	19.757	1.00	5.16
	ATOM	630	C	GLY	67	13.780	0.521	19.903	1.00	5.50
	ATOM	631	O	GLY	67	12.551	0.429	19.953	1.00	4.32
15	ATOM	632	N	THR	68	14.402	1.679	20.083	1.00	5.74
	ATOM	633	H	THR	68	15.364	1.730	20.241	1.00	0.00
	ATOM	634	CA	THR	68	13.602	2.891	20.096	1.00	10.10
	ATOM	635	CB	THR	68	14.274	3.962	21.038	1.00	7.70
	ATOM	636	OG1	THR	68	15.602	4.200	20.634	1.00	6.50
20	ATOM	637	HG1	THR	68	16.204	3.718	21.205	1.00	0.00
	ATOM	638	CG2	THR	68	14.284	3.486	22.482	1.00	6.39
	ATOM	639	C	THR	68	13.465	3.376	18.643	1.00	10.84
	ATOM	640	O	THR	68	14.033	2.800	17.706	1.00	8.07
	ATOM	641	N	TYR	69	12.687	4.417	18.438	1.00	11.31
25	ATOM	642	H	TYR	69	12.312	4.893	19.205	1.00	0.00
	ATOM	643	CA	TYR	69	12.398	4.956	17.143	1.00	8.56
	ATOM	644	CB	TYR	69	10.914	4.793	16.881	1.00	10.27
	ATOM	645	CG	TYR	69	10.494	3.343	16.804	1.00	9.08
	ATOM	646	CD1	TYR	69	10.116	2.661	17.959	1.00	11.62
30	ATOM	647	CE1	TYR	69	9.769	1.316	17.883	1.00	15.89
	ATOM	648	CD2	TYR	69	10.525	2.691	15.571	1.00	12.19
	ATOM	649	CE2	TYR	69	10.178	1.342	15.490	1.00	16.67
	ATOM	650	CZ	TYR	69	9.798	0.654	16.647	1.00	20.73
	ATOM	651	OH	TYR	69	9.417	-0.682	16.573	1.00	17.13
35	ATOM	652	HH	TYR	69	9.258	-0.922	15.649	1.00	0.00
	ATOM	653	C	TYR	69	12.784	6.416	17.202	1.00	10.11
	ATOM	654	O	TYR	69	12.428	7.111	18.163	1.00	14.34
	ATOM	655	N	ALA	70	13.510	6.930	16.224	1.00	12.39
	ATOM	656	H	ALA	70	13.836	6.347	15.502	1.00	0.00

	ATOM	657	CA	ALA	70	13.886	8.334	16.185	1.00	10.82
	ATOM	658	CB	ALA	70	15.239	8.583	16.848	1.00	2.00
	ATOM	659	C	ALA	70	14.013	8.833	14.753	1.00	12.46
	ATOM	660	O	ALA	70	14.523	8.112	13.875	1.00	13.59
5	ATOM	661	N	ILE	71	13.533	10.060	14.503	1.00	12.16
	ATOM	662	H	ILE	71	13.071	10.526	15.230	1.00	0.00
	ATOM	663	CA	ILE	71	13.773	10.777	13.252	1.00	8.89
	ATOM	664	CB	ILE	71	12.896	12.060	13.195	1.00	8.93
	ATOM	665	CG2	ILE	71	13.255	12.885	11.969	1.00	7.48
10	ATOM	666	CG1	ILE	71	11.433	11.675	13.158	1.00	2.00
	ATOM	667	CD	ILE	71	10.520	12.881	13.246	1.00	4.76
	ATOM	668	C	ILE	71	15.260	11.117	13.332	1.00	11.20
	ATOM	669	O	ILE	71	15.714	11.412	14.446	1.00	13.25
	ATOM	670	N	ALA	72	16.085	11.069	12.277	1.00	11.89
15	ATOM	671	H	ALA	72	15.694	10.895	11.392	1.00	0.00
	ATOM	672	CA	ALA	72	17.517	11.313	12.436	1.00	14.12
	ATOM	673	CB	ALA	72	18.258	11.340	11.128	1.00	12.87
	ATOM	674	C	ALA	72	17.808	12.650	13.095	1.00	15.57
	ATOM	675	O	ALA	72	17.219	13.669	12.737	1.00	13.25
20	ATOM	676	N	GLY	73	18.672	12.625	14.108	1.00	16.33
	ATOM	677	H	GLY	73	19.112	11.771	14.299	1.00	0.00
	ATOM	678	CA	GLY	73	19.052	13.798	14.882	1.00	11.52
	ATOM	679	C	GLY	73	17.960	14.265	15.834	1.00	14.51
	ATOM	680	O	GLY	73	18.049	15.366	16.389	1.00	17.12
25	ATOM	681	N	GLY	74	16.920	13.456	16.033	1.00	13.85
	ATOM	682	H	GLY	74	16.913	12.572	15.613	1.00	0.00
	ATOM	683	CA	GLY	74	15.824	13.787	16.906	1.00	9.77
	ATOM	684	C	GLY	74	15.825	12.895	18.126	1.00	13.72
	ATOM	685	O	GLY	74	16.649	11.983	18.268	1.00	12.11
30	ATOM	686	N	LYS	75	14.817	13.150	18.960	1.00	12.83
	ATOM	687	H	LYS	75	14.144	13.806	18.678	1.00	0.00
	ATOM	688	CA	LYS	75	14.668	12.437	20.215	1.00	14.60
	ATOM	689	CB	LYS	75	13.695	13.172	21.136	1.00	15.05
	ATOM	690	CG	LYS	75	14.384	14.383	21.707	1.00	11.11
35	ATOM	691	CD	LYS	75	13.518	15.120	22.693	1.00	13.01
	ATOM	692	CE	LYS	75	14.260	16.420	22.919	1.00	12.46
	ATOM	693	NZ	LYS	75	13.448	17.330	23.676	1.00	21.36
	ATOM	694	HZ1	LYS	75	12.515	17.427	23.225	1.00	0.00
	ATOM	695	HZ2	LYS	75	13.918	18.257	23.714	1.00	0.00

	ATOM	696	HZ3	LYS	75	13.329	16.962	24.643	1.00	0.00
	ATOM	697	C	LYS	75	14.178	11.018	20.033	1.00	16.16
	ATOM	698	O	LYS	75	13.270	10.809	19.220	1.00	17.70
	ATOM	699	N	ALA	76	14.734	10.048	20.761	1.00	13.81
5	ATOM	700	H	ALA	76	15.503	10.266	21.322	1.00	0.00
	ATOM	701	CA	ALA	76	14.257	8.684	20.683	1.00	10.95
	ATOM	702	CB	ALA	76	15.291	7.721	21.213	1.00	11.99
	ATOM	703	C	ALA	76	12.977	8.477	21.464	1.00	10.10
	ATOM	704	O	ALA	76	12.624	9.208	22.399	1.00	11.36
10	ATOM	705	N	HIS	77	12.180	7.515	21.027	1.00	6.45
	ATOM	706	H	HIS	77	12.464	6.969	20.258	1.00	0.00
	ATOM	707	CA	HIS	77	10.911	7.205	21.658	1.00	8.09
	ATOM	708	CB	HIS	77	9.751	7.778	20.879	1.00	8.53
	ATOM	709	CG	HIS	77	9.907	9.264	20.582	1.00	8.60
15	ATOM	710	CD2	HIS	77	9.429	10.268	21.371	1.00	9.12
	ATOM	711	ND1	HIS	77	10.514	9.833	19.550	1.00	9.19
	ATOM	712	HD1	HIS	77	11.053	9.394	18.851	1.00	0.00
	ATOM	713	CE1	HIS	77	10.418	11.122	19.680	1.00	2.93
	ATOM	714	NE2	HIS	77	9.768	11.368	20.778	1.00	9.32
20	ATOM	715	HE2	HIS	77	9.596	12.266	21.126	1.00	0.00
	ATOM	716	C	HIS	77	10.745	5.702	21.692	1.00	11.51
	ATOM	717	O	HIS	77	11.253	4.990	20.834	1.00	12.04
	ATOM	718	N	CYS	78	10.033	5.169	22.660	1.00	12.82
	ATOM	719	H	CYS	78	9.625	5.747	23.326	1.00	0.00
25	ATOM	720	CA	CYS	78	9.884	3.735	22.776	1.00	14.28
	ATOM	721	CB	CYS	78	9.381	3.354	24.175	1.00	11.77
	ATOM	722	SG	CYS	78	10.796	3.369	25.280	1.00	9.90
	ATOM	723	C	CYS	78	8.960	3.126	21.757	1.00	16.98
	ATOM	724	O	CYS	78	9.005	1.908	21.557	1.00	17.80
30	ATOM	725	N	GLY	79	8.128	3.943	21.113	1.00	15.68
	ATOM	726	H	GLY	79	8.169	4.912	21.228	1.00	0.00
	ATOM	727	CA	GLY	79	7.212	3.410	20.145	1.00	11.88
	ATOM	728	C	GLY	79	6.762	4.509	19.210	1.00	14.80
	ATOM	729	O	GLY	79	7.015	5.682	19.512	1.00	12.62
35	ATOM	730	N	PRO	80	6.089	4.186	18.089	1.00	16.78
	ATOM	731	CD	PRO	80	6.052	2.849	17.491	1.00	13.56
	ATOM	732	CA	PRO	80	5.496	5.158	17.187	1.00	15.14
	ATOM	733	CB	PRO	80	5.005	4.318	16.015	1.00	18.70
	ATOM	734	CG	PRO	80	4.852	2.933	16.571	1.00	14.52

	ATOM	735	C	PRO	80	4.425	6.013	17.827	1.00	13.25
	ATOM	736	O	PRO	80	4.390	7.209	17.551	1.00	13.75
	ATOM	737	N	ALA	81	3.582	5.470	18.715	1.00	11.81
	ATOM	738	H	ALA	81	3.648	4.511	18.927	1.00	0.00
5	ATOM	739	CA	ALA	81	2.560	6.256	19.378	1.00	8.01
	ATOM	740	CB	ALA	81	1.696	5.401	20.259	1.00	10.17
	ATOM	741	C	ALA	81	3.217	7.301	20.270	1.00	14.13
	ATOM	742	O	ALA	81	2.759	8.447	20.315	1.00	19.64
	ATOM	743	N	GLU	82	4.317	6.966	20.950	1.00	8.88
10	ATOM	744	H	GLU	82	4.675	6.068	20.827	1.00	0.00
	ATOM	745	CA	GLU	82	4.998	7.900	21.810	1.00	8.22
	ATOM	746	CB	GLU	82	6.055	7.211	22.673	1.00	12.54
	ATOM	747	CG	GLU	82	5.510	6.345	23.801	1.00	15.92
	ATOM	748	CD	GLU	82	5.248	4.903	23.391	1.00	21.02
15	ATOM	749	OE1	GLU	82	5.898	4.019	23.922	1.00	19.20
	ATOM	750	OE2	GLU	82	4.403	4.643	22.545	1.00	30.40
	ATOM	751	C	GLU	82	5.683	8.982	21.007	1.00	7.91
	ATOM	752	O	GLU	82	5.772	10.112	21.482	1.00	8.06
	ATOM	753	N	LEU	83	6.177	8.672	19.799	1.00	9.05
20	ATOM	754	H	LEU	83	6.060	7.759	19.462	1.00	0.00
	ATOM	755	CA	LEU	83	6.804	9.659	18.938	1.00	4.91
	ATOM	756	CB	LEU	83	7.521	8.966	17.736	1.00	3.58
	ATOM	757	CG	LEU	83	8.272	9.829	16.683	1.00	7.47
	ATOM	758	CD1	LEU	83	9.480	9.086	16.219	1.00	2.00
25	ATOM	759	CD2	LEU	83	7.357	10.216	15.524	1.00	2.00
	ATOM	760	C	LEU	83	5.752	10.640	18.449	1.00	4.63
	ATOM	761	O	LEU	83	5.988	11.849	18.544	1.00	5.60
	ATOM	762	N	CYS	84	4.602	10.164	17.973	1.00	8.55
	ATOM	763	H	CYS	84	4.494	9.192	17.890	1.00	0.00
30	ATOM	764	CA	CYS	84	3.548	11.027	17.482	1.00	8.64
	ATOM	765	CB	CYS	84	2.503	10.168	16.756	1.00	5.54
	ATOM	766	SG	CYS	84	3.177	9.486	15.221	1.00	11.42
	ATOM	767	C	CYS	84	2.926	11.826	18.615	1.00	12.17
	ATOM	768	O	CYS	84	2.575	12.979	18.399	1.00	11.99
35	ATOM	769	N	GLU	85	2.806	11.294	19.835	1.00	15.31
	ATOM	770	H	GLU	85	3.004	10.339	19.935	1.00	0.00
	ATOM	771	CA	GLU	85	2.350	12.030	21.007	1.00	12.31
	ATOM	772	CB	GLU	85	2.212	11.121	22.207	1.00	19.90
	ATOM	773	CG	GLU	85	0.815	10.555	22.406	1.00	31.63

	ATOM	774	CD	GLU	85	0.658	9.495	23.503	1.00	39.27
	ATOM	775	OE1	GLU	85	-0.477	9.081	23.738	1.00	41.21
	ATOM	776	OE2	GLU	85	1.642	9.071	24.118	1.00	42.94
	ATOM	777	C	GLU	85	3.333	13.125	21.372	1.00	6.87
5	ATOM	778	O	GLU	85	2.920	14.260	21.571	1.00	10.13
	ATOM	779	N	PHE	86	4.631	12.861	21.416	1.00	4.59
	ATOM	780	H	PHE	86	4.937	11.944	21.248	1.00	0.00
	ATOM	781	CA	PHE	86	5.603	13.890	21.725	1.00	6.95
	ATOM	782	CB	PHE	86	6.999	13.293	21.764	1.00	4.93
10	ATOM	783	CG	PHE	86	8.114	14.317	21.932	1.00	5.40
	ATOM	784	CD1	PHE	86	8.400	14.831	23.201	1.00	2.19
	ATOM	785	CD2	PHE	86	8.808	14.781	20.807	1.00	2.76
	ATOM	786	CE1	PHE	86	9.375	15.816	23.336	1.00	2.93
	ATOM	787	CE2	PHE	86	9.781	15.765	20.944	1.00	2.30
15	ATOM	788	CZ	PHE	86	10.064	16.284	22.212	1.00	5.55
	ATOM	789	C	PHE	86	5.575	15.027	20.720	1.00	9.00
	ATOM	790	O	PHE	86	5.446	16.187	21.109	1.00	14.30
	ATOM	791	N	TYR	87	5.653	14.760	19.418	1.00	11.37
	ATOM	792	H	TYR	87	5.691	13.826	19.113	1.00	0.00
20	ATOM	793	CA	TYR	87	5.666	15.833	18.446	1.00	6.03
	ATOM	794	CB	TYR	87	6.110	15.254	17.139	1.00	3.16
	ATOM	795	CG	TYR	87	7.591	14.946	17.117	1.00	2.00
	ATOM	796	CD1	TYR	87	8.021	13.631	17.046	1.00	5.05
	ATOM	797	CE1	TYR	87	9.391	13.356	16.974	1.00	8.26
25	ATOM	798	CD2	TYR	87	8.525	15.979	17.117	1.00	2.00
	ATOM	799	CE2	TYR	87	9.891	15.713	17.042	1.00	2.00
	ATOM	800	CZ	TYR	87	10.316	14.396	16.974	1.00	6.27
	ATOM	801	OH	TYR	87	11.668	14.102	16.932	1.00	7.53
	ATOM	802	HH	TYR	87	12.181	14.910	17.066	1.00	0.00
30	ATOM	803	C	TYR	87	4.352	16.586	18.305	1.00	3.38
	ATOM	804	O	TYR	87	4.319	17.653	17.702	1.00	5.53
	ATOM	805	N	SER	88	3.248	16.094	18.857	1.00	7.17
	ATOM	806	H	SER	88	3.264	15.179	19.207	1.00	0.00
	ATOM	807	CA	SER	88	2.009	16.852	18.979	1.00	6.67
35	ATOM	808	CB	SER	88	0.860	15.969	19.425	1.00	6.09
	ATOM	809	OG	SER	88	0.561	14.907	18.539	1.00	23.12
	ATOM	810	HG	SER	88	1.351	14.368	18.429	1.00	0.00
	ATOM	811	C	SER	88	2.160	17.942	20.036	1.00	9.31
	ATOM	812	O	SER	88	1.486	18.970	19.995	1.00	5.17

	ATOM	813	N	ARG	89	3.017	17.673	21.027	1.00	15.78
	ATOM	814	H	ARG	89	3.530	16.838	20.985	1.00	0.00
	ATOM	815	CA	ARG	89	3.262	18.543	22.175	1.00	19.64
	ATOM	816	CB	ARG	89	3.587	17.742	23.444	1.00	18.92
5	ATOM	817	CG	ARG	89	2.563	16.693	23.853	1.00	28.31
	ATOM	818	CD	ARG	89	2.997	15.851	25.067	1.00	36.85
	ATOM	819	NE	ARG	89	4.239	15.083	24.955	1.00	42.21
	ATOM	820	HE	ARG	89	5.061	15.540	24.679	1.00	0.00
	ATOM	821	CZ	ARG	89	4.296	13.764	25.223	1.00	44.61
10	ATOM	822	NH1	ARG	89	3.207	13.079	25.601	1.00	46.06
	ATOM	823	HH11	ARG	89	2.324	13.538	25.696	1.00	0.00
	ATOM	824	HH12	ARG	89	3.280	12.100	25.792	1.00	0.00
	ATOM	825	NH2	ARG	89	5.469	13.119	25.157	1.00	44.47
	ATOM	826	HH21	ARG	89	6.295	13.619	24.899	1.00	0.00
15	ATOM	827	HH22	ARG	89	5.518	12.140	25.357	1.00	0.00
	ATOM	828	C	ARG	89	4.444	19.469	21.928	1.00	18.88
	ATOM	829	O	ARG	89	4.507	20.553	22.493	1.00	20.00
	ATOM	830	N	ASP	90	5.421	19.082	21.131	1.00	18.60
	ATOM	831	H	ASP	90	5.407	18.181	20.738	1.00	0.00
20	ATOM	832	CA	ASP	90	6.582	19.891	20.903	1.00	16.39
	ATOM	833	CB	ASP	90	7.626	19.502	21.966	1.00	12.09
	ATOM	834	CG	ASP	90	8.925	20.286	22.048	1.00	10.44
	ATOM	835	OD1	ASP	90	9.737	19.962	22.905	1.00	21.16
	ATOM	836	OD2	ASP	90	9.156	21.203	21.267	1.00	19.94
25	ATOM	837	C	ASP	90	7.039	19.587	19.478	1.00	19.96
	ATOM	838	O	ASP	90	7.512	18.482	19.202	1.00	20.24
	ATOM	839	N	PRO	91	6.917	20.560	18.560	1.00	15.46
	ATOM	840	CD	PRO	91	6.233	21.831	18.781	1.00	17.20
	ATOM	841	CA	PRO	91	7.434	20.495	17.196	1.00	14.01
30	ATOM	842	CB	PRO	91	7.287	21.916	16.672	1.00	16.08
	ATOM	843	CG	PRO	91	7.060	22.761	17.913	1.00	12.13
	ATOM	844	C	PRO	91	8.844	19.968	17.102	1.00	14.28
	ATOM	845	O	PRO	91	9.173	19.194	16.210	1.00	16.05
	ATOM	846	N	ASP	92	9.683	20.419	18.028	1.00	12.31
35	ATOM	847	H	ASP	92	9.364	21.117	18.631	1.00	0.00
	ATOM	848	CA	ASP	92	11.043	19.991	18.195	1.00	10.93
	ATOM	849	CB	ASP	92	11.007	18.818	19.198	1.00	5.10
	ATOM	850	CG	ASP	92	12.355	18.438	19.826	1.00	8.25
	ATOM	851	OD1	ASP	92	13.246	19.264	20.003	1.00	14.68

	ATOM	852	OD2	ASP	92	12.549	17.275	20.136	1.00	12.78
	ATOM	853	C	ASP	92	11.829	19.653	16.932	1.00	12.54
	ATOM	854	O	ASP	92	12.501	18.619	16.798	1.00	13.03
	ATOM	855	N	GLY	93	11.772	20.607	16.009	1.00	12.18
5	ATOM	856	H	GLY	93	11.235	21.419	16.141	1.00	0.00
	ATOM	857	CA	GLY	93	12.563	20.488	14.786	1.00	13.73
	ATOM	858	C	GLY	93	11.725	20.330	13.537	1.00	8.10
	ATOM	859	O	GLY	93	12.192	20.497	12.408	1.00	11.87
	ATOM	860	N	LEU	94	10.493	19.914	13.762	1.00	4.57
10	ATOM	861	H	LEU	94	10.225	19.703	14.675	1.00	0.00
	ATOM	862	CA	LEU	94	9.523	19.788	12.708	1.00	10.89
	ATOM	863	CB	LEU	94	8.308	19.012	13.188	1.00	3.94
	ATOM	864	CG	LEU	94	8.411	17.587	13.597	1.00	3.94
	ATOM	865	CD1	LEU	94	7.031	17.090	13.966	1.00	2.31
15	ATOM	866	CD2	LEU	94	8.999	16.780	12.463	1.00	11.05
	ATOM	867	C	LEU	94	9.063	21.176	12.237	1.00	13.55
	ATOM	868	O	LEU	94	9.223	22.166	12.969	1.00	11.66
	ATOM	869	N	PRO	95	8.485	21.309	11.034	1.00	14.27
	ATOM	870	CD	PRO	95	8.563	20.350	9.925	1.00	7.51
20	ATOM	871	CA	PRO	95	7.915	22.559	10.591	1.00	13.61
	ATOM	872	CB	PRO	95	7.452	22.217	9.186	1.00	10.57
	ATOM	873	CG	PRO	95	7.348	20.732	9.137	1.00	8.09
	ATOM	874	C	PRO	95	6.847	23.113	11.518	1.00	13.42
	ATOM	875	O	PRO	95	6.668	24.329	11.647	1.00	16.04
25	ATOM	876	N	CYS	96	6.072	22.244	12.136	1.00	14.57
	ATOM	877	H	CYS	96	6.248	21.287	12.022	1.00	0.00
	ATOM	878	CA	CYS	96	5.039	22.624	13.080	1.00	12.49
	ATOM	879	CB	CYS	96	3.753	23.076	12.334	1.00	13.81
	ATOM	880	SG	CYS	96	2.809	22.013	11.202	1.00	10.86
30	ATOM	881	C	CYS	96	4.764	21.420	13.974	1.00	11.03
	ATOM	882	O	CYS	96	5.459	20.411	13.826	1.00	10.72
	ATOM	883	N	ASN	97	3.839	21.448	14.931	1.00	8.03
	ATOM	884	H	ASN	97	3.208	22.196	15.012	1.00	0.00
	ATOM	885	CA	ASN	97	3.559	20.279	15.739	1.00	7.35
35	ATOM	886	CB	ASN	97	3.041	20.641	17.155	1.00	4.07
	ATOM	887	CG	ASN	97	1.691	21.326	17.216	1.00	6.44
	ATOM	888	OD1	ASN	97	1.546	22.385	16.618	1.00	17.31
	ATOM	889	ND2	ASN	97	0.651	20.865	17.900	1.00	6.94
	ATOM	890	HD21	ASN	97	0.764	20.069	18.469	1.00	0.00

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	ATOM	891	HD22	ASN	97	-0.206	21.300	17.743	1.00	0.00
	ATOM	892	C	ASN	97	2.486	19.489	15.026	1.00	8.28
	ATOM	893	O	ASN	97	1.770	19.991	14.156	1.00	10.98
	ATOM	894	N	LEU	98	2.347	18.236	15.423	1.00	12.14
5	ATOM	895	H	LEU	98	2.886	17.927	16.180	1.00	0.00
	ATOM	896	CA	LEU	98	1.356	17.353	14.839	1.00	10.83
	ATOM	897	CB	LEU	98	1.685	15.889	15.187	1.00	7.32
	ATOM	898	CG	LEU	98	3.068	15.393	14.737	1.00	6.54
	ATOM	899	CD1	LEU	98	3.206	13.928	15.097	1.00	7.62
10	ATOM	900	CD2	LEU	98	3.254	15.611	13.231	1.00	2.41
	ATOM	901	C	LEU	98	0.019	17.761	15.393	1.00	9.96
	ATOM	902	O	LEU	98	-0.117	17.920	16.599	1.00	14.76
	ATOM	903	N	ARG	99	-0.969	17.998	14.552	1.00	12.00
	ATOM	904	H	ARG	99	-0.853	17.785	13.605	1.00	0.00
15	ATOM	905	CA	ARG	99	-2.257	18.422	15.030	1.00	11.66
	ATOM	906	CB	ARG	99	-2.520	19.819	14.458	1.00	12.20
	ATOM	907	CG	ARG	99	-1.461	20.810	14.959	1.00	9.52
	ATOM	908	CD	ARG	99	-1.525	22.166	14.292	1.00	10.29
	ATOM	909	NE	ARG	99	-0.269	22.879	14.499	1.00	11.13
20	ATOM	910	HE	ARG	99	0.463	22.410	14.946	1.00	0.00
	ATOM	911	CZ	ARG	99	-0.038	24.108	14.024	1.00	6.20
	ATOM	912	NH1	ARG	99	-0.942	24.777	13.321	1.00	10.93
	ATOM	913	HH11	ARG	99	-1.836	24.374	13.127	1.00	0.00
	ATOM	914	HH12	ARG	99	-0.723	25.694	12.986	1.00	0.00
25	ATOM	915	NH2	ARG	99	1.126	24.694	14.265	1.00	4.38
	ATOM	916	HH21	ARG	99	1.813	24.226	14.820	1.00	0.00
	ATOM	917	HH22	ARG	99	1.302	25.617	13.927	1.00	0.00
	ATOM	918	C	ARG	99	-3.269	17.374	14.595	1.00	16.11
	ATOM	919	O	ARG	99	-3.328	16.338	15.272	1.00	19.03
30	ATOM	920	N	LYS	100	-4.050	17.477	13.516	1.00	16.69
	ATOM	921	H	LYS	100	-3.918	18.213	12.869	1.00	0.00
	ATOM	922	CA	LYS	100	-5.053	16.439	13.215	1.00	20.22
	ATOM	923	CB	LYS	100	-6.150	17.030	12.293	1.00	22.25
	ATOM	924	CG	LYS	100	-7.259	16.096	11.791	1.00	30.42
35	ATOM	925	CD	LYS	100	-7.988	16.782	10.629	1.00	38.20
	ATOM	926	CE	LYS	100	-8.924	15.887	9.811	1.00	42.38
	ATOM	927	NZ	LYS	100	-8.227	14.874	9.034	1.00	46.25
	ATOM	928	HZ1	LYS	100	-7.665	14.285	9.681	1.00	0.00
	ATOM	929	HZ2	LYS	100	-7.598	15.329	8.342	1.00	0.00

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	ATOM	930	HZ3	LYS	100	-8.923	14.282	8.536	1.00	0.00
	ATOM	931	C	LYS	100	-4.432	15.183	12.566	1.00	16.85
	ATOM	932	O	LYS	100	-3.696	15.275	11.569	1.00	15.54
	ATOM	933	N	PRO	101	-4.669	13.987	13.131	1.00	13.08
5	ATOM	934	CD	PRO	101	-5.370	13.784	14.388	1.00	7.49
	ATOM	935	CA	PRO	101	-4.277	12.708	12.564	1.00	11.31
	ATOM	936	CB	PRO	101	-4.602	11.755	13.678	1.00	6.33
	ATOM	937	CG	PRO	101	-5.819	12.361	14.308	1.00	3.78
	ATOM	938	C	PRO	101	-5.030	12.465	11.269	1.00	10.35
10	ATOM	939	O	PRO	101	-6.262	12.590	11.215	1.00	12.69
	ATOM	940	N	CYS	102	-4.343	12.176	10.182	1.00	9.14
	ATOM	941	H	CYS	102	-3.391	12.015	10.264	1.00	0.00
	ATOM	942	CA	CYS	102	-5.048	11.857	8.941	1.00	11.88
	ATOM	943	CB	CYS	102	-4.153	12.171	7.768	1.00	11.92
15	ATOM	944	SG	CYS	102	-4.935	11.867	6.165	1.00	13.71
	ATOM	945	C	CYS	102	-5.393	10.362	9.002	1.00	12.91
	ATOM	946	O	CYS	102	-4.678	9.431	8.600	1.00	11.19
	ATOM	947	N	ASN	103	-6.550	10.168	9.618	1.00	10.89
	ATOM	948	H	ASN	103	-7.043	10.958	9.927	1.00	0.00
20	ATOM	949	CA	ASN	103	-7.044	8.843	9.919	1.00	11.19
	ATOM	950	CB	ASN	103	-8.144	8.940	10.978	1.00	8.17
	ATOM	951	CG	ASN	103	-7.592	9.244	12.364	1.00	8.17
	ATOM	952	OD1	ASN	103	-6.421	9.068	12.663	1.00	15.63
	ATOM	953	ND2	ASN	103	-8.372	9.703	13.314	1.00	15.55
25	ATOM	954	HD21	ASN	103	-9.323	9.825	13.123	1.00	0.00
	ATOM	955	HD22	ASN	103	-7.943	9.918	14.169	1.00	0.00
	ATOM	956	C	ASN	103	-7.569	8.118	8.716	1.00	8.63
	ATOM	957	O	ASN	103	-8.330	8.700	7.939	1.00	9.71
	ATOM	958	N	ARG	104	-7.178	6.847	8.614	1.00	9.83
30	ATOM	959	H	ARG	104	-6.631	6.474	9.337	1.00	0.00
	ATOM	960	CA	ARG	104	-7.597	5.971	7.538	1.00	6.25
	ATOM	961	CB	ARG	104	-7.267	4.514	7.782	1.00	8.62
	ATOM	962	CG	ARG	104	-5.860	3.941	7.783	1.00	3.24
	ATOM	963	CD	ARG	104	-6.139	2.498	8.209	1.00	10.70
35	ATOM	964	NE	ARG	104	-5.367	2.175	9.396	1.00	18.79
	ATOM	965	HE	ARG	104	-4.399	2.204	9.337	1.00	0.00
	ATOM	966	CZ	ARG	104	-5.879	1.729	10.539	1.00	21.66
	ATOM	967	NH1	ARG	104	-7.180	1.522	10.699	1.00	28.57
	ATOM	968	HH11	ARG	104	-7.808	1.680	9.936	1.00	0.00

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	ATOM	969	HH12	ARG	104	-7.523	1.167	11.568	1.00	0.00
	ATOM	970	NH2	ARG	104	-5.056	1.550	11.575	1.00	30.06
	ATOM	971	HH21	ARG	104	-4.083	1.765	11.484	1.00	0.00
	ATOM	972	HH22	ARG	104	-5.413	1.212	12.445	1.00	0.00
5	ATOM	973	C	ARG	104	-9.101	6.043	7.449	1.00	9.23
	ATOM	974	O	ARG	104	-9.787	6.062	8.477	1.00	11.51
	ATOM	975	N	PRO	105	-9.660	6.168	6.249	1.00	13.97
	ATOM	976	CD	PRO	105	-8.924	6.498	5.033	1.00	10.44
	ATOM	977	CA	PRO	105	-11.091	6.079	6.010	1.00	14.04
10	ATOM	978	CB	PRO	105	-11.213	6.227	4.521	1.00	16.08
	ATOM	979	CG	PRO	105	-10.017	7.060	4.161	1.00	15.10
	ATOM	980	C	PRO	105	-11.695	4.775	6.517	1.00	18.06
	ATOM	981	O	PRO	105	-10.991	3.768	6.660	1.00	18.50
	ATOM	982	N	SER	106	-12.999	4.738	6.776	1.00	21.15
15	ATOM	983	H	SER	106	-13.535	5.558	6.746	1.00	0.00
	ATOM	984	CA	SER	106	-13.664	3.505	7.149	1.00	21.87
	ATOM	985	CB	SER	106	-15.140	3.789	7.401	1.00	22.16
	ATOM	986	OG	SER	106	-15.313	4.735	8.445	1.00	25.97
	ATOM	987	HG	SER	106	-14.780	4.508	9.214	1.00	0.00
20	ATOM	988	C	SER	106	-13.520	2.430	6.063	1.00	23.43
	ATOM	989	O	SER	106	-13.672	2.683	4.865	1.00	20.97
	ATOM	990	N	GLY	107	-13.132	1.232	6.509	1.00	21.55
	ATOM	991	H	GLY	107	-12.849	1.128	7.440	1.00	0.00
	ATOM	992	CA	GLY	107	-12.980	0.119	5.609	1.00	20.51
25	ATOM	993	C	GLY	107	-11.576	0.059	5.036	1.00	24.96
	ATOM	994	O	GLY	107	-11.188	-0.959	4.456	1.00	27.67
	ATOM	995	N	LEU	108	-10.765	1.111	5.178	1.00	22.03
	ATOM	996	H	LEU	108	-11.032	1.900	5.692	1.00	0.00
	ATOM	997	CA	LEU	108	-9.414	1.042	4.673	1.00	16.09
30	ATOM	998	CB	LEU	108	-8.874	2.413	4.278	1.00	12.09
	ATOM	999	CG	LEU	108	-7.414	2.431	3.836	1.00	10.25
	ATOM	1000	CD1	LEU	108	-7.261	1.578	2.612	1.00	11.68
	ATOM	1001	CD2	LEU	108	-6.960	3.852	3.576	1.00	12.09
	ATOM	1002	C	LEU	108	-8.654	0.500	5.862	1.00	12.99
35	ATOM	1003	O	LEU	108	-8.771	0.954	7.001	1.00	12.44
	ATOM	1004	N	GLU	109	-7.921	-0.543	5.533	1.00	14.56
	ATOM	1005	H	GLU	109	-7.853	-0.782	4.585	1.00	0.00
	ATOM	1006	CA	GLU	109	-7.127	-1.275	6.481	1.00	13.90
	ATOM	1007	CB	GLU	109	-7.309	-2.773	6.230	1.00	19.29

	ATOM	1008	CG	GLU	109	-8.738	-3.284	6.141	1.00	29.48
	ATOM	1009	CD	GLU	109	-9.520	-3.230	7.441	1.00	40.66
	ATOM	1010	OE1	GLU	109	-10.270	-2.277	7.666	1.00	45.63
	ATOM	1011	OE2	GLU	109	-9.388	-4.168	8.223	1.00	51.26
5	ATOM	1012	C	GLU	109	-5.695	-0.866	6.231	1.00	8.40
	ATOM	1013	O	GLU	109	-5.398	-0.456	5.114	1.00	10.50
	ATOM	1014	N	PRO	110	-4.758	-0.979	7.155	1.00	5.95
	ATOM	1015	CD	PRO	110	-4.984	-1.282	8.564	1.00	5.24
	ATOM	1016	CA	PRO	110	-3.339	-0.915	6.861	1.00	10.05
10	ATOM	1017	CB	PRO	110	-2.674	-1.303	8.175	1.00	4.68
	ATOM	1018	CG	PRO	110	-3.664	-0.827	9.198	1.00	4.54
	ATOM	1019	C	PRO	110	-2.896	-1.785	5.680	1.00	7.66
	ATOM	1020	O	PRO	110	-3.310	-2.924	5.536	1.00	11.84
	ATOM	1021	N	GLN	111	-2.008	-1.294	4.838	1.00	10.25
15	ATOM	1022	H	GLN	111	-1.653	-0.395	5.008	1.00	0.00
	ATOM	1023	CA	GLN	111	-1.593	-1.998	3.637	1.00	8.90
	ATOM	1024	CB	GLN	111	-1.157	-0.944	2.610	1.00	2.00
	ATOM	1025	CG	GLN	111	-0.638	-1.453	1.268	1.00	8.79
	ATOM	1026	CD	GLN	111	-1.646	-2.233	0.449	1.00	5.34
20	ATOM	1027	OE1	GLN	111	-2.850	-2.233	0.684	1.00	5.86
	ATOM	1028	NE2	GLN	111	-1.177	-2.954	-0.536	1.00	6.33
	ATOM	1029	HE21	GLN	111	-0.210	-2.930	-0.716	1.00	0.00
	ATOM	1030	HE22	GLN	111	-1.812	-3.537	-1.006	1.00	0.00
	ATOM	1031	C	GLN	111	-0.493	-3.010	3.891	1.00	8.54
25	ATOM	1032	O	GLN	111	0.573	-2.599	4.345	1.00	5.96
	ATOM	1033	N	PRO	112	-0.673	-4.308	3.579	1.00	9.29
	ATOM	1034	CD	PRO	112	-1.931	-4.872	3.075	1.00	7.95
	ATOM	1035	CA	PRO	112	0.366	-5.332	3.622	1.00	5.72
	ATOM	1036	CB	PRO	112	-0.244	-6.558	2.999	1.00	5.42
30	ATOM	1037	CG	PRO	112	-1.719	-6.364	3.178	1.00	5.05
	ATOM	1038	C	PRO	112	1.647	-4.955	2.921	1.00	6.46
	ATOM	1039	O	PRO	112	1.636	-4.369	1.839	1.00	6.87
	ATOM	1040	N	GLY	113	2.766	-5.354	3.510	1.00	6.40
	ATOM	1041	H	GLY	113	2.703	-5.962	4.274	1.00	0.00
35	ATOM	1042	CA	GLY	113	4.046	-5.056	2.945	1.00	6.46
	ATOM	1043	C	GLY	113	4.653	-6.303	2.353	1.00	8.56
	ATOM	1044	O	GLY	113	4.674	-7.344	3.011	1.00	13.23
	ATOM	1045	N	VAL	114	5.213	-6.187	1.155	1.00	4.67
	ATOM	1046	H	VAL	114	5.187	-5.284	0.757	1.00	0.00

	ATOM	1047	CA	VAL	114	5.865	-7.249	0.419	1.00	4.61
	ATOM	1048	CB	VAL	114	6.315	-6.694	-0.990	1.00	3.22
	ATOM	1049	CG1	VAL	114	7.105	-7.719	-1.741	1.00	3.86
	ATOM	1050	CG2	VAL	114	5.102	-6.401	-1.877	1.00	2.00
5	ATOM	1051	C	VAL	114	7.035	-7.793	1.206	1.00	4.93
	ATOM	1052	O	VAL	114	7.054	-9.006	1.413	1.00	10.35
	ATOM	1053	N	PHE	115	7.975	-7.002	1.730	1.00	6.39
	ATOM	1054	H	PHE	115	7.899	-6.033	1.601	1.00	0.00
	ATOM	1055	CA	PHE	115	9.090	-7.562	2.483	1.00	6.83
10	ATOM	1056	CB	PHE	115	10.118	-6.486	2.878	1.00	7.30
	ATOM	1057	CG	PHE	115	11.542	-6.975	3.148	1.00	2.90
	ATOM	1058	CD1	PHE	115	12.012	-8.211	2.690	1.00	2.00
	ATOM	1059	CD2	PHE	115	12.423	-6.132	3.827	1.00	7.94
	ATOM	1060	CE1	PHE	115	13.340	-8.584	2.900	1.00	2.00
15	ATOM	1061	CE2	PHE	115	13.756	-6.511	4.036	1.00	4.71
	ATOM	1062	CZ	PHE	115	14.213	-7.732	3.568	1.00	4.45
	ATOM	1063	C	PHE	115	8.579	-8.229	3.744	1.00	6.82
	ATOM	1064	O	PHE	115	9.145	-9.245	4.138	1.00	10.26
	ATOM	1065	N	ASP	116	7.515	-7.717	4.372	1.00	7.65
20	ATOM	1066	H	ASP	116	7.189	-6.839	4.082	1.00	0.00
	ATOM	1067	CA	ASP	116	6.901	-8.348	5.542	1.00	9.49
	ATOM	1068	CB	ASP	116	5.707	-7.554	6.057	1.00	3.65
	ATOM	1069	CG	ASP	116	5.989	-6.246	6.768	1.00	10.72
	ATOM	1070	OD1	ASP	116	7.132	-5.815	6.873	1.00	10.46
25	ATOM	1071	OD2	ASP	116	5.026	-5.653	7.242	1.00	12.59
	ATOM	1072	C	ASP	116	6.394	-9.762	5.278	1.00	8.07
	ATOM	1073	O	ASP	116	6.621	-10.666	6.092	1.00	8.78
	ATOM	1074	N	CYS	117	5.675	-9.910	4.162	1.00	5.88
	ATOM	1075	H	CYS	117	5.429	-9.094	3.680	1.00	0.00
30	ATOM	1076	CA	CYS	117	5.170	-11.181	3.662	1.00	7.52
	ATOM	1077	CB	CYS	117	4.341	-10.980	2.386	1.00	2.00
	ATOM	1078	SG	CYS	117	2.747	-10.208	2.720	1.00	5.27
	ATOM	1079	C	CYS	117	6.332	-12.097	3.342	1.00	5.36
	ATOM	1080	O	CYS	117	6.327	-13.261	3.729	1.00	12.91
35	ATOM	1081	N	LEU	118	7.372	-11.579	2.716	1.00	2.00
	ATOM	1082	H	LEU	118	7.373	-10.622	2.486	1.00	0.00
	ATOM	1083	CA	LEU	118	8.534	-12.362	2.404	1.00	3.50
	ATOM	1084	CB	LEU	118	9.533	-11.502	1.607	1.00	7.77
	ATOM	1085	CG	LEU	118	10.691	-12.257	0.967	1.00	2.00

	ATOM	1086	CD1	LEU	118	10.302	-12.739	-0.416	1.00	10.01
	ATOM	1087	CD2	LEU	118	11.873	-11.362	0.852	1.00	2.00
	ATOM	1088	C	LEU	118	9.207	-12.888	3.672	1.00	7.78
	ATOM	1089	O	LEU	118	9.371	-14.097	3.878	1.00	14.19
5	ATOM	1090	N	ARG	119	9.570	-11.996	4.586	1.00	8.62
	ATOM	1091	H	ARG	119	9.355	-11.059	4.427	1.00	0.00
	ATOM	1092	CA	ARG	119	10.267	-12.355	5.802	1.00	6.69
	ATOM	1093	CB	ARG	119	10.642	-11.148	6.609	1.00	3.95
	ATOM	1094	CG	ARG	119	11.653	-10.284	5.927	1.00	4.79
10	ATOM	1095	CD	ARG	119	11.994	-9.159	6.864	1.00	10.98
	ATOM	1096	NE	ARG	119	10.818	-8.346	7.066	1.00	16.70
	ATOM	1097	HE	ARG	119	10.122	-8.329	6.375	1.00	0.00
	ATOM	1098	CZ	ARG	119	10.663	-7.617	8.160	1.00	19.41
	ATOM	1099	NH1	ARG	119	11.579	-7.589	9.132	1.00	24.20
15	ATOM	1100	HH11	ARG	119	12.412	-8.139	9.057	1.00	0.00
	ATOM	1101	HH12	ARG	119	11.421	-7.034	9.948	1.00	0.00
	ATOM	1102	NH2	ARG	119	9.541	-6.930	8.271	1.00	17.87
	ATOM	1103	HH21	ARG	119	8.858	-6.988	7.541	1.00	0.00
	ATOM	1104	HH22	ARG	119	9.373	-6.357	9.072	1.00	0.00
20	ATOM	1105	C	ARG	119	9.472	-13.239	6.700	1.00	7.52
	ATOM	1106	O	ARG	119	10.066	-14.043	7.407	1.00	12.31
	ATOM	1107	N	ASP	120	8.151	-13.126	6.680	1.00	9.60
	ATOM	1108	H	ASP	120	7.743	-12.422	6.133	1.00	0.00
	ATOM	1109	CA	ASP	120	7.299	-13.966	7.478	1.00	7.93
25	ATOM	1110	CB	ASP	120	5.844	-13.534	7.320	1.00	7.93
	ATOM	1111	CG	ASP	120	4.844	-14.338	8.161	1.00	15.41
	ATOM	1112	OD1	ASP	120	4.818	-14.250	9.396	1.00	15.27
	ATOM	1113	OD2	ASP	120	4.075	-15.076	7.561	1.00	17.76
	ATOM	1114	C	ASP	120	7.480	-15.388	6.996	1.00	13.71
30	ATOM	1115	O	ASP	120	7.696	-16.290	7.814	1.00	12.77
	ATOM	1116	N	ALA	121	7.454	-15.565	5.667	1.00	9.90
	ATOM	1117	H	ALA	121	7.350	-14.790	5.071	1.00	0.00
	ATOM	1118	CA	ALA	121	7.575	-16.873	5.067	1.00	8.78
	ATOM	1119	CB	ALA	121	7.243	-16.761	3.570	1.00	4.63
35	ATOM	1120	C	ALA	121	8.965	-17.446	5.267	1.00	6.18
	ATOM	1121	O	ALA	121	9.119	-18.625	5.604	1.00	11.46
	ATOM	1122	N	MET	122	10.012	-16.646	5.142	1.00	9.21
	ATOM	1123	H	MET	122	9.854	-15.711	4.890	1.00	0.00
	ATOM	1124	CA	MET	122	11.368	-17.142	5.331	1.00	12.95

	ATOM	1125	CB	MET	122	12.397	-16.141	4.868	1.00	13.19
	ATOM	1126	CG	MET	122	12.235	-15.697	3.430	1.00	6.17
	ATOM	1127	SD	MET	122	13.633	-14.669	2.923	1.00	13.61
	ATOM	1128	CE	MET	122	13.348	-13.208	3.865	1.00	22.78
5	ATOM	1129	C	MET	122	11.665	-17.462	6.785	1.00	15.80
	ATOM	1130	O	MET	122	12.376	-18.420	7.076	1.00	18.09
	ATOM	1131	N	VAL	123	11.153	-16.686	7.730	1.00	17.27
	ATOM	1132	H	VAL	123	10.655	-15.882	7.474	1.00	0.00
	ATOM	1133	CA	VAL	123	11.331	-16.955	9.146	1.00	18.34
10	ATOM	1134	CB	VAL	123	10.805	-15.703	9.903	1.00	14.82
	ATOM	1135	CG1	VAL	123	10.469	-15.927	11.378	1.00	7.76
	ATOM	1136	CG2	VAL	123	11.945	-14.692	9.816	1.00	11.65
	ATOM	1137	C	VAL	123	10.594	-18.255	9.500	1.00	20.45
	ATOM	1138	O	VAL	123	11.187	-19.111	10.163	1.00	22.11
15	ATOM	1139	N	ARG	124	9.342	-18.449	9.049	1.00	18.15
	ATOM	1140	H	ARG	124	8.898	-17.702	8.593	1.00	0.00
	ATOM	1141	CA	ARG	124	8.594	-19.687	9.247	1.00	15.36
	ATOM	1142	CB	ARG	124	7.245	-19.585	8.554	1.00	11.87
	ATOM	1143	CG	ARG	124	6.392	-20.857	8.581	1.00	12.47
20	ATOM	1144	CD	ARG	124	4.913	-20.641	8.301	1.00	8.51
	ATOM	1145	NE	ARG	124	4.293	-19.885	9.383	1.00	12.39
	ATOM	1146	HE	ARG	124	4.020	-20.375	10.184	1.00	0.00
	ATOM	1147	CZ	ARG	124	4.085	-18.568	9.313	1.00	13.51
	ATOM	1148	NH1	ARG	124	4.424	-17.850	8.232	1.00	11.97
25	ATOM	1149	HH11	ARG	124	4.843	-18.283	7.433	1.00	0.00
	ATOM	1150	HH12	ARG	124	4.251	-16.869	8.234	1.00	0.00
	ATOM	1151	NH2	ARG	124	3.587	-17.946	10.370	1.00	10.34
	ATOM	1152	HH21	ARG	124	3.381	-18.461	11.201	1.00	0.00
	ATOM	1153	HH22	ARG	124	3.424	-16.959	10.340	1.00	0.00
30	ATOM	1154	C	ARG	124	9.360	-20.879	8.713	1.00	15.60
	ATOM	1155	O	ARG	124	9.503	-21.882	9.406	1.00	18.62
	ATOM	1156	N	ASP	125	9.926	-20.747	7.519	1.00	20.33
	ATOM	1157	H	ASP	125	9.827	-19.897	7.038	1.00	0.00
	ATOM	1158	CA	ASP	125	10.715	-21.802	6.909	1.00	21.31
35	ATOM	1159	CB	ASP	125	11.096	-21.389	5.486	1.00	21.39
	ATOM	1160	CG	ASP	125	11.702	-22.503	4.645	1.00	27.25
	ATOM	1161	OD1	ASP	125	10.972	-23.416	4.269	1.00	34.81
	ATOM	1162	OD2	ASP	125	12.899	-22.469	4.358	1.00	31.46
	ATOM	1163	C	ASP	125	11.970	-22.077	7.727	1.00	23.47

	ATOM	1164	O	ASP	125	12.253	-23.230	8.042	1.00	24.12
	ATOM	1165	N	TYR	126	12.745	-21.070	8.118	1.00	21.49
	ATOM	1166	H	TYR	126	12.467	-20.160	7.902	1.00	0.00
	ATOM	1167	CA	TYR	126	13.942	-21.267	8.901	1.00	19.50
5	ATOM	1168	CB	TYR	126	14.635	-19.916	9.133	1.00	25.90
	ATOM	1169	CG	TYR	126	15.783	-19.899	10.150	1.00	29.35
	ATOM	1170	CD1	TYR	126	17.104	-20.144	9.730	1.00	27.77
	ATOM	1171	CE1	TYR	126	18.145	-20.102	10.667	1.00	31.52
	ATOM	1172	CD2	TYR	126	15.511	-19.613	11.506	1.00	28.26
10	ATOM	1173	CE2	TYR	126	16.546	-19.577	12.439	1.00	30.56
	ATOM	1174	CZ	TYR	126	17.861	-19.813	12.012	1.00	35.32
	ATOM	1175	OH	TYR	126	18.902	-19.727	12.929	1.00	40.70
	ATOM	1176	HH	TYR	126	19.731	-19.774	12.446	1.00	0.00
	ATOM	1177	C	TYR	126	13.646	-21.923	10.239	1.00	21.90
15	ATOM	1178	O	TYR	126	14.406	-22.816	10.619	1.00	25.30
	ATOM	1179	N	VAL	127	12.631	-21.526	11.013	1.00	19.39
	ATOM	1180	H	VAL	127	12.049	-20.807	10.687	1.00	0.00
	ATOM	1181	CA	VAL	127	12.377	-22.137	12.317	1.00	19.85
	ATOM	1182	CB	VAL	127	11.246	-21.401	13.053	1.00	17.19
20	ATOM	1183	CG1	VAL	127	10.876	-22.108	14.356	1.00	16.84
	ATOM	1184	CG2	VAL	127	11.731	-20.002	13.403	1.00	17.80
	ATOM	1185	C	VAL	127	12.011	-23.603	12.144	1.00	22.88
	ATOM	1186	O	VAL	127	12.647	-24.446	12.772	1.00	22.13
	ATOM	1187	N	ARG	128	11.060	-23.912	11.258	1.00	24.55
25	ATOM	1188	H	ARG	128	10.583	-23.176	10.812	1.00	0.00
	ATOM	1189	CA	ARG	128	10.661	-25.264	10.923	1.00	22.77
	ATOM	1190	CB	ARG	128	9.644	-25.176	9.804	1.00	23.22
	ATOM	1191	CG	ARG	128	9.141	-26.500	9.265	1.00	26.51
	ATOM	1192	CD	ARG	128	8.025	-26.280	8.265	1.00	26.64
30	ATOM	1193	NE	ARG	128	8.493	-25.548	7.104	1.00	31.22
	ATOM	1194	HE	ARG	128	9.341	-25.807	6.688	1.00	0.00
	ATOM	1195	CZ	ARG	128	7.797	-24.530	6.581	1.00	35.88
	ATOM	1196	NH1	ARG	128	6.632	-24.107	7.082	1.00	34.74
	ATOM	1197	HH11	ARG	128	6.238	-24.538	7.894	1.00	0.00
35	ATOM	1198	HH12	ARG	128	6.166	-23.334	6.649	1.00	0.00
	ATOM	1199	NH2	ARG	128	8.284	-23.930	5.502	1.00	40.92
	ATOM	1200	HH21	ARG	128	9.152	-24.244	5.115	1.00	0.00
	ATOM	1201	HH22	ARG	128	7.797	-23.165	5.082	1.00	0.00
	ATOM	1202	C	ARG	128	11.859	-26.103	10.505	1.00	25.38

	ATOM	1203	O	ARG	128	11.996	-27.258	10.905	1.00	31.19
	ATOM	1204	N	GLN	129	12.763	-25.555	9.706	1.00	27.63
	ATOM	1205	H	GLN	129	12.611	-24.646	9.375	1.00	0.00
	ATOM	1206	CA	GLN	129	13.945	-26.270	9.289	1.00	30.34
5	ATOM	1207	CB	GLN	129	14.576	-25.497	8.155	1.00	29.95
	ATOM	1208	CG	GLN	129	13.868	-25.769	6.847	1.00	32.24
	ATOM	1209	CD	GLN	129	14.365	-27.031	6.177	1.00	38.31
	ATOM	1210	OE1	GLN	129	14.088	-28.153	6.591	1.00	43.39
	ATOM	1211	NE2	GLN	129	15.146	-26.896	5.116	1.00	41.97
10	ATOM	1212	HE21	GLN	129	15.362	-25.995	4.785	1.00	0.00
	ATOM	1213	HE22	GLN	129	15.498	-27.716	4.717	1.00	0.00
	ATOM	1214	C	GLN	129	14.931	-26.488	10.436	1.00	35.26
	ATOM	1215	O	GLN	129	15.086	-27.639	10.857	1.00	35.05
	ATOM	1216	N	THR	130	15.534	-25.453	11.045	1.00	39.04
15	ATOM	1217	H	THR	130	15.356	-24.543	10.735	1.00	0.00
	ATOM	1218	CA	THR	130	16.514	-25.655	12.114	1.00	38.84
	ATOM	1219	CB	THR	130	17.282	-24.342	12.434	1.00	41.46
	ATOM	1220	OG1	THR	130	16.840	-23.271	11.602	1.00	35.92
	ATOM	1221	HG1	THR	130	15.925	-23.048	11.823	1.00	0.00
20	ATOM	1222	CG2	THR	130	18.766	-24.585	12.221	1.00	39.34
	ATOM	1223	C	THR	130	15.985	-26.204	13.436	1.00	37.73
	ATOM	1224	O	THR	130	16.698	-26.948	14.113	1.00	40.99
	ATOM	1225	N	TRP	131	14.773	-25.865	13.868	1.00	34.87
	ATOM	1226	H	TRP	131	14.215	-25.292	13.309	1.00	0.00
25	ATOM	1227	CA	TRP	131	14.227	-26.388	15.111	1.00	35.73
	ATOM	1228	CB	TRP	131	13.480	-25.284	15.867	1.00	36.36
	ATOM	1229	CG	TRP	131	14.343	-24.072	16.164	1.00	38.36
	ATOM	1230	CD2	TRP	131	15.380	-24.020	17.052	1.00	39.04
	ATOM	1231	CE2	TRP	131	15.821	-22.709	16.869	1.00	40.13
30	ATOM	1232	CE3	TRP	131	16.020	-24.847	17.975	1.00	44.19
	ATOM	1233	CD1	TRP	131	14.152	-22.898	15.494	1.00	38.77
	ATOM	1234	NE1	TRP	131	15.071	-22.093	15.951	1.00	37.02
	ATOM	1235	HE1	TRP	131	15.199	-21.145	15.686	1.00	0.00
	ATOM	1236	CZ2	TRP	131	16.901	-22.200	17.596	1.00	44.06
35	ATOM	1237	CZ3	TRP	131	17.105	-24.344	18.706	1.00	43.68
	ATOM	1238	CH2	TRP	131	17.542	-23.029	18.517	1.00	41.50
	ATOM	1239	C	TRP	131	13.273	-27.560	14.873	1.00	38.05
	ATOM	1240	O	TRP	131	12.439	-27.871	15.725	1.00	36.61
	ATOM	1241	N	LYS	132	13.346	-28.194	13.694	1.00	43.57

	ATOM	1242	H	LYS	132	13.985	-27.860	13.032	1.00	0.00
	ATOM	1243	CA	LYS	132	12.551	-29.349	13.270	1.00	47.47
	ATOM	1244	CB	LYS	132	13.283	-30.640	13.676	1.00	48.07
	ATOM	1245	CG	LYS	132	14.216	-31.184	12.593	1.00	49.73
5	ATOM	1246	CD	LYS	132	15.521	-30.405	12.488	1.00	53.88
	ATOM	1247	CE	LYS	132	16.307	-30.757	11.227	1.00	55.30
	ATOM	1248	NZ	LYS	132	17.576	-30.049	11.211	1.00	57.90
	ATOM	1249	HZ1	LYS	132	18.153	-30.357	12.021	1.00	0.00
	ATOM	1250	HZ2	LYS	132	17.398	-29.026	11.289	1.00	0.00
10	ATOM	1251	HZ3	LYS	132	18.082	-30.248	10.325	1.00	0.00
	ATOM	1252	C	LYS	132	11.082	-29.544	13.629	1.00	49.55
	ATOM	1253	O	LYS	132	10.526	-30.587	13.267	1.00	53.16
	ATOM	1254	N	LEU	133	10.364	-28.657	14.311	1.00	53.10
	ATOM	1255	H	LEU	133	10.767	-27.821	14.621	1.00	0.00
15	ATOM	1256	CA	LEU	133	8.971	-28.915	14.607	1.00	57.74
	ATOM	1257	CB	LEU	133	8.743	-28.920	16.126	1.00	62.97
	ATOM	1258	CG	LEU	133	8.758	-30.282	16.864	1.00	66.61
	ATOM	1259	CD1	LEU	133	7.846	-31.256	16.107	1.00	66.25
	ATOM	1260	CD2	LEU	133	10.173	-30.854	16.951	1.00	67.72
20	ATOM	1261	C	LEU	133	8.011	-27.941	13.957	1.00	56.96
	ATOM	1262	O	LEU	133	8.185	-26.726	13.984	1.00	60.52
	ATOM	1263	N	GLU	134	6.998	-28.531	13.340	1.00	54.79
	ATOM	1264	H	GLU	134	6.959	-29.504	13.399	1.00	0.00
	ATOM	1265	CA	GLU	134	5.955	-27.814	12.637	1.00	52.86
25	ATOM	1266	CB	GLU	134	5.538	-28.675	11.420	1.00	55.90
	ATOM	1267	CG	GLU	134	4.795	-30.029	11.620	1.00	60.27
	ATOM	1268	CD	GLU	134	5.592	-31.292	11.981	1.00	62.82
	ATOM	1269	OE1	GLU	134	5.830	-31.530	13.167	1.00	66.15
	ATOM	1270	OE2	GLU	134	5.947	-32.059	11.081	1.00	59.19
30	ATOM	1271	C	GLU	134	4.756	-27.492	13.544	1.00	50.75
	ATOM	1272	O	GLU	134	4.844	-27.559	14.775	1.00	51.08
	ATOM	1273	N	GLY	135	3.620	-27.059	12.992	1.00	48.62
	ATOM	1274	H	GLY	135	3.650	-26.799	12.050	1.00	0.00
	ATOM	1275	CA	GLY	135	2.363	-26.848	13.724	1.00	46.72
35	ATOM	1276	C	GLY	135	2.302	-25.664	14.678	1.00	44.51
	ATOM	1277	O	GLY	135	3.004	-24.664	14.536	1.00	46.83
	ATOM	1278	N	GLU	136	1.450	-25.759	15.693	1.00	46.52
	ATOM	1279	H	GLU	136	0.871	-26.545	15.747	1.00	0.00
	ATOM	1280	CA	GLU	136	1.327	-24.710	16.710	1.00	49.02

	ATOM	1281	CB	GLU	136	0.262	-25.059	17.763	1.00	51.89
	ATOM	1282	CG	GLU	136	-0.931	-24.090	17.857	1.00	52.06
	ATOM	1283	CD	GLU	136	-0.588	-22.646	18.218	1.00	54.10
	ATOM	1284	OE1	GLU	136	-0.616	-21.791	17.329	1.00	57.12
5	ATOM	1285	OE2	GLU	136	-0.300	-22.376	19.384	1.00	51.65
	ATOM	1286	C	GLU	136	2.645	-24.489	17.440	1.00	46.65
	ATOM	1287	O	GLU	136	2.944	-23.398	17.936	1.00	46.30
	ATOM	1288	N	ALA	137	3.437	-25.556	17.502	1.00	45.19
	ATOM	1289	H	ALA	137	3.139	-26.407	17.128	1.00	0.00
10	ATOM	1290	CA	ALA	137	4.765	-25.477	18.061	1.00	44.22
	ATOM	1291	CB	ALA	137	5.442	-26.837	18.034	1.00	45.58
	ATOM	1292	C	ALA	137	5.559	-24.509	17.196	1.00	42.82
	ATOM	1293	O	ALA	137	6.139	-23.610	17.799	1.00	47.38
	ATOM	1294	N	LEU	138	5.513	-24.597	15.847	1.00	36.97
15	ATOM	1295	H	LEU	138	5.012	-25.341	15.455	1.00	0.00
	ATOM	1296	CA	LEU	138	6.214	-23.700	14.925	1.00	31.88
	ATOM	1297	CB	LEU	138	5.865	-23.934	13.461	1.00	27.69
	ATOM	1298	CG	LEU	138	6.930	-24.048	12.355	1.00	28.20
	ATOM	1299	CD1	LEU	138	6.191	-24.029	11.030	1.00	18.29
20	ATOM	1300	CD2	LEU	138	7.918	-22.914	12.347	1.00	21.98
	ATOM	1301	C	LEU	138	5.821	-22.269	15.197	1.00	29.00
	ATOM	1302	O	LEU	138	6.672	-21.402	15.377	1.00	27.80
	ATOM	1303	N	GLU	139	4.526	-22.008	15.247	1.00	29.67
	ATOM	1304	H	GLU	139	3.896	-22.746	15.108	1.00	0.00
25	ATOM	1305	CA	GLU	139	4.052	-20.660	15.464	1.00	34.50
	ATOM	1306	CB	GLU	139	2.538	-20.665	15.451	1.00	38.42
	ATOM	1307	CG	GLU	139	1.945	-20.289	14.082	1.00	44.60
	ATOM	1308	CD	GLU	139	2.501	-21.012	12.851	1.00	46.22
	ATOM	1309	OE1	GLU	139	3.301	-20.401	12.149	1.00	43.80
30	ATOM	1310	OE2	GLU	139	2.135	-22.162	12.583	1.00	48.63
	ATOM	1311	C	GLU	139	4.587	-20.109	16.760	1.00	36.52
	ATOM	1312	O	GLU	139	5.196	-19.037	16.774	1.00	39.38
	ATOM	1313	N	GLN	140	4.479	-20.876	17.839	1.00	38.33
	ATOM	1314	H	GLN	140	4.053	-21.755	17.765	1.00	0.00
35	ATOM	1315	CA	GLN	140	5.037	-20.439	19.100	1.00	37.72
	ATOM	1316	CB	GLN	140	4.724	-21.476	20.168	1.00	45.54
	ATOM	1317	CG	GLN	140	3.307	-21.321	20.713	1.00	56.23
	ATOM	1318	CD	GLN	140	2.957	-22.366	21.770	1.00	65.59
	ATOM	1319	OE1	GLN	140	3.103	-22.167	22.978	1.00	66.51

	ATOM	1320	NE2	GLN	140	2.480	-23.531	21.354	1.00	67.31
	ATOM	1321	HE21	GLN	140	2.379	-23.670	20.391	1.00	0.00
	ATOM	1322	HE22	GLN	140	2.259	-24.177	22.050	1.00	0.00
	ATOM	1323	C	GLN	140	6.543	-20.224	18.975	1.00	33.59
5	ATOM	1324	O	GLN	140	7.032	-19.142	19.323	1.00	31.72
	ATOM	1325	N	ALA	141	7.291	-21.155	18.388	1.00	25.14
	ATOM	1326	H	ALA	141	6.848	-21.926	17.991	1.00	0.00
	ATOM	1327	CA	ALA	141	8.725	-21.022	18.220	1.00	25.84
	ATOM	1328	CB	ALA	141	9.300	-22.343	17.683	1.00	28.13
10	ATOM	1329	C	ALA	141	9.137	-19.872	17.290	1.00	28.14
	ATOM	1330	O	ALA	141	10.287	-19.437	17.344	1.00	30.78
	ATOM	1331	N	ILE	142	8.266	-19.316	16.429	1.00	30.84
	ATOM	1332	H	ILE	142	7.402	-19.763	16.297	1.00	0.00
	ATOM	1333	CA	ILE	142	8.571	-18.125	15.627	1.00	25.85
15	ATOM	1334	CB	ILE	142	7.449	-17.965	14.547	1.00	18.89
	ATOM	1335	CG2	ILE	142	7.432	-16.583	13.908	1.00	21.04
	ATOM	1336	CG1	ILE	142	7.732	-18.967	13.428	1.00	20.14
	ATOM	1337	CD	ILE	142	6.556	-19.269	12.492	1.00	15.71
	ATOM	1338	C	ILE	142	8.660	-16.923	16.573	1.00	29.99
20	ATOM	1339	O	ILE	142	9.565	-16.097	16.493	1.00	31.41
	ATOM	1340	N	ILE	143	7.736	-16.877	17.532	1.00	35.52
	ATOM	1341	H	ILE	143	7.119	-17.638	17.588	1.00	0.00
	ATOM	1342	CA	ILE	143	7.613	-15.810	18.518	1.00	37.48
	ATOM	1343	CB	ILE	143	6.199	-15.808	19.126	1.00	37.49
25	ATOM	1344	CG2	ILE	143	5.947	-14.427	19.699	1.00	39.63
	ATOM	1345	CG1	ILE	143	5.114	-16.077	18.092	1.00	40.16
	ATOM	1346	CD	ILE	143	3.812	-16.651	18.686	1.00	41.67
	ATOM	1347	C	ILE	143	8.625	-16.006	19.641	1.00	41.27
	ATOM	1348	O	ILE	143	9.047	-15.041	20.273	1.00	41.07
30	ATOM	1349	N	SER	144	8.976	-17.255	19.949	1.00	47.79
	ATOM	1350	H	SER	144	8.616	-17.986	19.410	1.00	0.00
	ATOM	1351	CA	SER	144	9.893	-17.576	21.033	1.00	52.28
	ATOM	1352	CB	SER	144	9.534	-18.976	21.532	1.00	52.29
	ATOM	1353	OG	SER	144	8.145	-19.030	21.895	1.00	53.23
35	ATOM	1354	HG	SER	144	7.612	-18.881	21.109	1.00	0.00
	ATOM	1355	C	SER	144	11.370	-17.481	20.651	1.00	55.20
	ATOM	1356	O	SER	144	12.205	-17.066	21.467	1.00	58.47
	ATOM	1357	N	GLN	145	11.769	-17.860	19.438	1.00	58.14
	ATOM	1358	H	GLN	145	11.133	-18.245	18.798	1.00	0.00

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	ATOM	1359	CA	GLN	145	13.142	-17.681	18.996	1.00	59.26
	ATOM	1360	CB	GLN	145	13.637	-18.900	18.186	1.00	58.99
	ATOM	1361	CG	GLN	145	14.116	-20.105	19.015	1.00	51.70
	ATOM	1362	CD	GLN	145	13.040	-20.987	19.634	1.00	46.51
5	ATOM	1363	OE1	GLN	145	12.040	-20.526	20.174	1.00	46.63
	ATOM	1364	NE2	GLN	145	13.205	-22.301	19.603	1.00	42.17
	ATOM	1365	HE21	GLN	145	14.014	-22.649	19.174	1.00	0.00
	ATOM	1366	HE22	GLN	145	12.505	-22.846	20.014	1.00	0.00
	ATOM	1367	C	GLN	145	13.086	-16.436	18.121	1.00	59.37
10	ATOM	1368	O	GLN	145	12.441	-16.418	17.066	1.00	59.11
	ATOM	1369	N	ALA	146	13.761	-15.381	18.584	1.00	57.86
	ATOM	1370	H	ALA	146	14.348	-15.502	19.358	1.00	0.00
	ATOM	1371	CA	ALA	146	13.716	-14.068	17.955	1.00	54.83
	ATOM	1372	CB	ALA	146	12.490	-13.332	18.513	1.00	51.86
15	ATOM	1373	C	ALA	146	15.014	-13.314	18.266	1.00	50.12
	ATOM	1374	O	ALA	146	16.019	-13.982	18.529	1.00	50.90
	ATOM	1375	N	PRO	147	15.147	-11.984	18.217	1.00	45.39
	ATOM	1376	CD	PRO	147	15.344	-11.200	19.436	1.00	46.16
	ATOM	1377	CA	PRO	147	14.760	-11.112	17.111	1.00	40.33
20	ATOM	1378	CB	PRO	147	14.220	-9.884	17.808	1.00	42.32
	ATOM	1379	CG	PRO	147	15.140	-9.750	18.996	1.00	43.96
	ATOM	1380	C	PRO	147	15.855	-10.796	16.102	1.00	37.26
	ATOM	1381	O	PRO	147	15.560	-10.360	14.988	1.00	38.02
	ATOM	1382	N	GLN	148	17.131	-11.025	16.427	1.00	34.30
25	ATOM	1383	H	GLN	148	17.343	-11.320	17.344	1.00	0.00
	ATOM	1384	CA	GLN	148	18.237	-10.822	15.500	1.00	29.73
	ATOM	1385	CB	GLN	148	19.609	-11.094	16.111	1.00	33.42
	ATOM	1386	CG	GLN	148	20.143	-10.081	17.095	1.00	38.19
	ATOM	1387	CD	GLN	148	19.410	-10.075	18.428	1.00	44.05
30	ATOM	1388	OE1	GLN	148	18.677	-10.999	18.795	1.00	44.63
	ATOM	1389	NE2	GLN	148	19.566	-9.020	19.207	1.00	47.86
	ATOM	1390	HE21	GLN	148	20.127	-8.273	18.912	1.00	0.00
	ATOM	1391	HE22	GLN	148	19.121	-9.038	20.078	1.00	0.00
	ATOM	1392	C	GLN	148	18.122	-11.771	14.327	1.00	25.44
35	ATOM	1393	O	GLN	148	18.647	-11.478	13.258	1.00	25.23
	ATOM	1394	N	VAL	149	17.436	-12.905	14.497	1.00	23.42
	ATOM	1395	H	VAL	149	17.174	-13.141	15.408	1.00	0.00
	ATOM	1396	CA	VAL	149	17.228	-13.855	13.417	1.00	22.10
	ATOM	1397	CB	VAL	149	16.571	-15.172	13.960	1.00	21.97

	ATOM	1398	CG1	VAL	149	17.492	-15.765	15.008	1.00	21.05
	ATOM	1399	CG2	VAL	149	15.220	-14.937	14.591	1.00	22.67
	ATOM	1400	C	VAL	149	16.368	-13.249	12.309	1.00	20.80
	ATOM	1401	O	VAL	149	16.646	-13.427	11.129	1.00	21.04
5	ATOM	1402	N	GLU	150	15.360	-12.455	12.650	1.00	22.05
	ATOM	1403	H	GLU	150	15.224	-12.254	13.595	1.00	0.00
	ATOM	1404	CA	GLU	150	14.490	-11.803	11.691	1.00	23.41
	ATOM	1405	CB	GLU	150	13.373	-11.162	12.511	1.00	27.75
	ATOM	1406	CG	GLU	150	12.420	-10.140	11.875	1.00	40.15
10	ATOM	1407	CD	GLU	150	11.567	-10.618	10.706	1.00	40.12
	ATOM	1408	OE1	GLU	150	12.136	-11.023	9.695	1.00	42.37
	ATOM	1409	OE2	GLU	150	10.338	-10.554	10.791	1.00	43.49
	ATOM	1410	C	GLU	150	15.292	-10.801	10.858	1.00	24.41
	ATOM	1411	O	GLU	150	15.156	-10.712	9.633	1.00	25.40
15	ATOM	1412	N	LYS	151	16.208	-10.100	11.535	1.00	22.99
	ATOM	1413	H	LYS	151	16.231	-10.204	12.506	1.00	0.00
	ATOM	1414	CA	LYS	151	17.115	-9.138	10.931	1.00	19.15
	ATOM	1415	CB	LYS	151	17.760	-8.384	12.094	1.00	17.32
	ATOM	1416	CG	LYS	151	18.552	-7.125	11.791	1.00	20.52
20	ATOM	1417	CD	LYS	151	18.701	-6.401	13.121	1.00	26.52
	ATOM	1418	CE	LYS	151	19.509	-5.113	13.089	1.00	31.53
	ATOM	1419	NZ	LYS	151	20.920	-5.393	12.889	1.00	44.71
	ATOM	1420	HZ1	LYS	151	21.255	-6.004	13.662	1.00	0.00
	ATOM	1421	HZ2	LYS	151	21.473	-4.513	12.884	1.00	0.00
25	ATOM	1422	HZ3	LYS	151	21.048	-5.890	11.985	1.00	0.00
	ATOM	1423	C	LYS	151	18.127	-9.852	10.036	1.00	16.31
	ATOM	1424	O	LYS	151	18.480	-9.389	8.955	1.00	12.19
	ATOM	1425	N	LEU	152	18.601	-11.015	10.444	1.00	16.09
	ATOM	1426	H	LEU	152	18.331	-11.332	11.331	1.00	0.00
30	ATOM	1427	CA	LEU	152	19.524	-11.849	9.703	1.00	12.00
	ATOM	1428	CB	LEU	152	19.855	-13.040	10.500	1.00	15.88
	ATOM	1429	CG	LEU	152	21.222	-13.560	10.639	1.00	16.05
	ATOM	1430	CD1	LEU	152	21.077	-14.775	11.546	1.00	16.90
	ATOM	1431	CD2	LEU	152	21.866	-13.869	9.301	1.00	11.67
35	ATOM	1432	C	LEU	152	18.870	-12.335	8.438	1.00	13.18
	ATOM	1433	O	LEU	152	19.497	-12.346	7.383	1.00	18.93
	ATOM	1434	N	ILE	153	17.631	-12.796	8.537	1.00	12.61
	ATOM	1435	H	ILE	153	17.208	-12.810	9.421	1.00	0.00
	ATOM	1436	CA	ILE	153	16.871	-13.277	7.392	1.00	18.32

	ATOM	1437	CB	ILE	153	15.603	-13.925	8.013	1.00	19.63
	ATOM	1438	CG2	ILE	153	14.479	-14.062	7.006	1.00	15.55
	ATOM	1439	CG1	ILE	153	16.011	-15.280	8.620	1.00	20.47
	ATOM	1440	CD	ILE	153	16.260	-16.471	7.679	1.00	22.78
5	ATOM	1441	C	ILE	153	16.613	-12.117	6.406	1.00	16.99
	ATOM	1442	O	ILE	153	16.784	-12.260	5.192	1.00	14.84
	ATOM	1443	N	ALA	154	16.283	-10.929	6.906	1.00	14.59
	ATOM	1444	H	ALA	154	16.079	-10.868	7.864	1.00	0.00
	ATOM	1445	CA	ALA	154	16.129	-9.740	6.087	1.00	14.27
10	ATOM	1446	CB	ALA	154	15.654	-8.595	6.981	1.00	11.41
	ATOM	1447	C	ALA	154	17.402	-9.316	5.362	1.00	13.07
	ATOM	1448	O	ALA	154	17.394	-9.006	4.159	1.00	13.71
	ATOM	1449	N	THR	155	18.526	-9.306	6.099	1.00	12.27
	ATOM	1450	H	THR	155	18.467	-9.606	7.029	1.00	0.00
15	ATOM	1451	CA	THR	155	19.830	-8.914	5.559	1.00	10.44
	ATOM	1452	CB	THR	155	20.887	-8.906	6.713	1.00	9.80
	ATOM	1453	OG1	THR	155	20.456	-7.925	7.663	1.00	18.84
	ATOM	1454	HG1	THR	155	19.665	-8.275	8.091	1.00	0.00
	ATOM	1455	CG2	THR	155	22.278	-8.550	6.270	1.00	9.45
20	ATOM	1456	C	THR	155	20.236	-9.883	4.440	1.00	14.92
	ATOM	1457	O	THR	155	20.778	-9.460	3.403	1.00	15.13
	ATOM	1458	N	THR	156	19.900	-11.172	4.578	1.00	17.24
	ATOM	1459	H	THR	156	19.422	-11.506	5.372	1.00	0.00
	ATOM	1460	CA	THR	156	20.317	-12.165	3.609	1.00	17.42
25	ATOM	1461	CB	THR	156	20.778	-13.424	4.387	1.00	21.01
	ATOM	1462	OG1	THR	156	19.701	-13.847	5.216	1.00	28.15
	ATOM	1463	HG1	THR	156	20.090	-14.396	5.915	1.00	0.00
	ATOM	1464	CG2	THR	156	22.010	-13.145	5.222	1.00	17.36
	ATOM	1465	C	THR	156	19.286	-12.525	2.548	1.00	16.54
30	ATOM	1466	O	THR	156	19.675	-13.151	1.556	1.00	16.61
	ATOM	1467	N	ALA	157	18.021	-12.082	2.648	1.00	11.96
	ATOM	1468	H	ALA	157	17.765	-11.593	3.460	1.00	0.00
	ATOM	1469	CA	ALA	157	16.978	-12.353	1.665	1.00	8.10
	ATOM	1470	CB	ALA	157	15.792	-11.463	1.875	1.00	5.22
35	ATOM	1471	C	ALA	157	17.334	-12.205	0.203	1.00	11.31
	ATOM	1472	O	ALA	157	16.768	-12.899	-0.628	1.00	12.82
	ATOM	1473	N	HIS	158	18.272	-11.321	-0.131	1.00	11.13
	ATOM	1474	H	HIS	158	18.588	-10.744	0.590	1.00	0.00
	ATOM	1475	CA	HIS	158	18.748	-11.150	-1.490	1.00	13.55

	ATOM	1476	CB	HIS	158	19.697	-9.955	-1.599	1.00	12.74
	ATOM	1477	CG	HIS	158	20.963	-9.981	-0.760	1.00	6.21
	ATOM	1478	CD2	HIS	158	22.226	-10.209	-1.250	1.00	5.93
	ATOM	1479	ND1	HIS	158	21.062	-9.767	0.543	1.00	9.66
5	ATOM	1480	HD1	HIS	158	20.371	-9.464	1.176	1.00	0.00
	ATOM	1481	CE1	HIS	158	22.335	-9.850	0.857	1.00	7.67
	ATOM	1482	NE2	HIS	158	23.027	-10.113	-0.218	1.00	9.31
	ATOM	1483	HE2	HIS	158	24.008	-10.028	-0.233	1.00	0.00
	ATOM	1484	C	HIS	158	19.481	-12.359	-2.052	1.00	16.19
10	ATOM	1485	O	HIS	158	19.448	-12.632	-3.236	1.00	20.47
	ATOM	1486	N	GLU	159	20.175	-13.107	-1.216	1.00	17.23
	ATOM	1487	H	GLU	159	20.072	-12.955	-0.257	1.00	0.00
	ATOM	1488	CA	GLU	159	20.940	-14.254	-1.657	1.00	20.55
	ATOM	1489	CB	GLU	159	21.657	-14.764	-0.429	1.00	20.24
15	ATOM	1490	CG	GLU	159	22.842	-13.822	-0.229	1.00	27.41
	ATOM	1491	CD	GLU	159	23.580	-13.832	1.103	1.00	35.05
	ATOM	1492	OE1	GLU	159	24.583	-13.120	1.190	1.00	41.39
	ATOM	1493	OE2	GLU	159	23.163	-14.513	2.045	1.00	37.57
	ATOM	1494	C	GLU	159	20.124	-15.341	-2.356	1.00	20.03
20	ATOM	1495	O	GLU	159	20.575	-15.957	-3.322	1.00	23.76
	ATOM	1496	N	ARG	160	18.879	-15.517	-1.936	1.00	16.92
	ATOM	1497	H	ARG	160	18.494	-14.915	-1.266	1.00	0.00
	ATOM	1498	CA	ARG	160	18.031	-16.500	-2.555	1.00	16.29
	ATOM	1499	CB	ARG	160	17.147	-17.180	-1.499	1.00	18.52
25	ATOM	1500	CG	ARG	160	16.251	-16.276	-0.682	1.00	24.37
	ATOM	1501	CD	ARG	160	16.483	-16.570	0.783	1.00	31.61
	ATOM	1502	NE	ARG	160	15.708	-17.723	1.197	1.00	33.80
	ATOM	1503	HE	ARG	160	15.197	-18.221	0.523	1.00	0.00
	ATOM	1504	CZ	ARG	160	15.689	-18.141	2.467	1.00	35.13
30	ATOM	1505	NH1	ARG	160	16.392	-17.532	3.449	1.00	23.68
	ATOM	1506	HH11	ARG	160	16.962	-16.736	3.244	1.00	0.00
	ATOM	1507	HH12	ARG	160	16.341	-17.882	4.384	1.00	0.00
	ATOM	1508	NH2	ARG	160	14.895	-19.179	2.743	1.00	34.48
	ATOM	1509	HH21	ARG	160	14.346	-19.596	2.018	1.00	0.00
35	ATOM	1510	HH22	ARG	160	14.848	-19.541	3.672	1.00	0.00
	ATOM	1511	C	ARG	160	17.175	-15.879	-3.625	1.00	13.93
	ATOM	1512	O	ARG	160	16.168	-16.457	-4.043	1.00	18.72
	ATOM	1513	N	MET	161	17.530	-14.702	-4.103	1.00	13.50
	ATOM	1514	H	MET	161	18.413	-14.316	-3.923	1.00	0.00

	ATOM	1515	CA	MET	161	16.690	-14.069	-5.093	1.00	14.46
	ATOM	1516	CB	MET	161	16.666	-12.575	-4.874	1.00	13.73
	ATOM	1517	CG	MET	161	15.916	-12.130	-3.637	1.00	7.08
	ATOM	1518	SD	MET	161	14.135	-12.358	-3.669	1.00	12.33
5	ATOM	1519	CE	MET	161	14.041	-13.525	-2.328	1.00	2.25
	ATOM	1520	C	MET	161	17.226	-14.378	-6.475	1.00	14.92
	ATOM	1521	O	MET	161	18.442	-14.348	-6.651	1.00	15.63
	ATOM	1522	N	PRO	162	16.412	-14.649	-7.509	1.00	16.02
	ATOM	1523	CD	PRO	162	14.961	-14.709	-7.458	1.00	14.38
10	ATOM	1524	CA	PRO	162	16.873	-15.010	-8.847	1.00	17.79
	ATOM	1525	CB	PRO	162	15.602	-15.227	-9.619	1.00	17.80
	ATOM	1526	CG	PRO	162	14.600	-14.377	-8.889	1.00	17.12
	ATOM	1527	C	PRO	162	17.806	-14.015	-9.519	1.00	19.05
	ATOM	1528	O	PRO	162	18.647	-14.391	-10.328	1.00	21.41
15	ATOM	1529	N	TRP	163	17.661	-12.733	-9.167	1.00	19.49
	ATOM	1530	H	TRP	163	17.016	-12.516	-8.470	1.00	0.00
	ATOM	1531	CA	TRP	163	18.473	-11.669	-9.712	1.00	14.79
	ATOM	1532	CB	TRP	163	17.754	-10.334	-9.563	1.00	16.38
	ATOM	1533	CG	TRP	163	17.026	-10.040	-8.251	1.00	15.65
20	ATOM	1534	CD2	TRP	163	17.590	-9.606	-7.061	1.00	18.28
	ATOM	1535	CE2	TRP	163	16.439	-9.447	-6.263	1.00	16.96
	ATOM	1536	CE3	TRP	163	18.862	-9.320	-6.520	1.00	14.05
	ATOM	1537	CD1	TRP	163	15.661	-10.145	-8.186	1.00	11.47
	ATOM	1538	NE1	TRP	163	15.341	-9.775	-6.971	1.00	13.57
25	ATOM	1539	HE1	TRP	163	14.423	-9.631	-6.647	1.00	0.00
	ATOM	1540	CZ2	TRP	163	16.543	-8.999	-4.933	1.00	14.05
	ATOM	1541	CZ3	TRP	163	18.963	-8.873	-5.184	1.00	13.85
	ATOM	1542	CH2	TRP	163	17.808	-8.715	-4.398	1.00	8.31
	ATOM	1543	C	TRP	163	19.827	-11.574	-9.065	1.00	14.37
30	ATOM	1544	O	TRP	163	20.704	-10.868	-9.562	1.00	18.36
	ATOM	1545	N	TYR	164	20.068	-12.259	-7.958	1.00	12.49
	ATOM	1546	H	TYR	164	19.506	-13.007	-7.676	1.00	0.00
	ATOM	1547	CA	TYR	164	21.355	-12.130	-7.333	1.00	13.07
	ATOM	1548	CB	TYR	164	21.230	-12.357	-5.831	1.00	12.72
35	ATOM	1549	CG	TYR	164	22.544	-12.125	-5.109	1.00	10.10
	ATOM	1550	CD1	TYR	164	23.138	-10.875	-5.204	1.00	13.14
	ATOM	1551	CE1	TYR	164	24.358	-10.634	-4.587	1.00	14.29
	ATOM	1552	CD2	TYR	164	23.168	-13.149	-4.388	1.00	13.03
	ATOM	1553	CE2	TYR	164	24.392	-12.907	-3.762	1.00	11.06

	ATOM	1554	CZ	TYR	164	24.966	-11.647	-3.873	1.00	10.57
	ATOM	1555	OH	TYR	164	26.144	-11.333	-3.245	1.00	21.87
	ATOM	1556	HH	TYR	164	26.452	-12.073	-2.702	1.00	0.00
	ATOM	1557	C	TYR	164	22.208	-13.205	-7.980	1.00	18.71
5	ATOM	1558	O	TYR	164	21.751	-14.324	-8.226	1.00	17.75
	ATOM	1559	N	HIS	165	23.435	-12.870	-8.377	1.00	22.75
	ATOM	1560	H	HIS	165	23.729	-11.938	-8.262	1.00	0.00
	ATOM	1561	CA	HIS	165	24.344	-13.855	-8.923	1.00	24.59
	ATOM	1562	CB	HIS	165	24.598	-13.627	-10.422	1.00	23.90
10	ATOM	1563	CG	HIS	165	23.397	-13.904	-11.315	1.00	26.19
	ATOM	1564	CD2	HIS	165	22.254	-13.135	-11.335	1.00	27.29
	ATOM	1565	ND1	HIS	165	23.221	-14.894	-12.184	1.00	27.47
	ATOM	1566	HD1	HIS	165	23.783	-15.675	-12.397	1.00	0.00
	ATOM	1567	CE1	HIS	165	22.034	-14.736	-12.698	1.00	25.41
15	ATOM	1568	NE2	HIS	165	21.456	-13.688	-12.189	1.00	21.53
	ATOM	1569	HE2	HIS	165	20.486	-13.539	-12.228	1.00	0.00
	ATOM	1570	C	HIS	165	25.633	-13.656	-8.156	1.00	26.23
	ATOM	1571	O	HIS	165	26.362	-12.687	-8.378	1.00	31.62
	ATOM	1572	N	SER	166	25.946	-14.547	-7.232	1.00	25.87
20	ATOM	1573	H	SER	166	25.362	-15.319	-7.058	1.00	0.00
	ATOM	1574	CA	SER	166	27.160	-14.490	-6.428	1.00	30.85
	ATOM	1575	CB	SER	166	27.023	-15.535	-5.320	1.00	33.11
	ATOM	1576	OG	SER	166	26.099	-16.587	-5.652	1.00	40.48
	ATOM	1577	HG	SER	166	25.779	-16.955	-4.812	1.00	0.00
25	ATOM	1578	C	SER	166	28.485	-14.691	-7.166	1.00	32.77
	ATOM	1579	O	SER	166	29.556	-14.546	-6.587	1.00	34.67
	ATOM	1580	N	SER	167	28.439	-15.017	-8.444	1.00	32.96
	ATOM	1581	H	SER	167	27.581	-15.108	-8.895	1.00	0.00
	ATOM	1582	CA	SER	167	29.597	-15.394	-9.219	1.00	32.24
30	ATOM	1583	CB	SER	167	29.281	-16.777	-9.733	1.00	35.47
	ATOM	1584	OG	SER	167	27.912	-16.819	-10.196	1.00	38.74
	ATOM	1585	HG	SER	167	27.744	-17.703	-10.543	1.00	0.00
	ATOM	1586	C	SER	167	30.007	-14.475	-10.363	1.00	31.65
	ATOM	1587	O	SER	167	31.116	-14.603	-10.885	1.00	35.00
35	ATOM	1588	N	LEU	168	29.170	-13.535	-10.796	1.00	29.62
	ATOM	1589	H	LEU	168	28.501	-13.148	-10.198	1.00	0.00
	ATOM	1590	CA	LEU	168	29.473	-12.889	-12.053	1.00	29.98
	ATOM	1591	CB	LEU	168	28.202	-12.382	-12.708	1.00	27.12
	ATOM	1592	CG	LEU	168	27.207	-13.436	-13.139	1.00	23.43

	ATOM	1593	CD1	LEU	168	26.136	-12.746	-13.947	1.00	23.27
	ATOM	1594	CD2	LEU	168	27.873	-14.525	-13.992	1.00	22.89
	ATOM	1595	C	LEU	168	30.445	-11.753	-11.974	1.00	32.36
	ATOM	1596	O	LEU	168	30.379	-10.917	-11.074	1.00	36.48
5	ATOM	1597	N	THR	169	31.400	-11.777	-12.898	1.00	31.71
	ATOM	1598	H	THR	169	31.509	-12.555	-13.479	1.00	0.00
	ATOM	1599	CA	THR	169	32.276	-10.639	-13.076	1.00	30.85
	ATOM	1600	CB	THR	169	33.596	-11.055	-13.767	1.00	32.01
	ATOM	1601	OG1	THR	169	33.258	-11.649	-15.020	1.00	34.34
10	ATOM	1602	HG1	THR	169	34.045	-12.124	-15.328	1.00	0.00
	ATOM	1603	CG2	THR	169	34.415	-12.014	-12.917	1.00	33.00
	ATOM	1604	C	THR	169	31.478	-9.695	-13.973	1.00	29.05
	ATOM	1605	O	THR	169	30.372	-10.044	-14.417	1.00	26.29
	ATOM	1606	N	ARG	170	32.041	-8.525	-14.294	1.00	30.94
15	ATOM	1607	H	ARG	170	32.861	-8.261	-13.824	1.00	0.00
	ATOM	1608	CA	ARG	170	31.421	-7.557	-15.199	1.00	27.92
	ATOM	1609	CB	ARG	170	32.320	-6.316	-15.323	1.00	25.77
	ATOM	1610	CG	ARG	170	31.766	-5.288	-16.289	1.00	22.36
	ATOM	1611	CD	ARG	170	32.742	-4.160	-16.541	1.00	21.88
20	ATOM	1612	NE	ARG	170	32.560	-3.097	-15.587	1.00	23.01
	ATOM	1613	HE	ARG	170	32.924	-3.206	-14.684	1.00	0.00
	ATOM	1614	CZ	ARG	170	31.948	-1.951	-15.896	1.00	26.69
	ATOM	1615	NH1	ARG	170	31.809	-1.036	-14.946	1.00	32.94
	ATOM	1616	HH11	ARG	170	32.161	-1.213	-14.027	1.00	0.00
25	ATOM	1617	HH12	ARG	170	31.349	-0.170	-15.144	1.00	0.00
	ATOM	1618	NH2	ARG	170	31.505	-1.660	-17.112	1.00	25.12
	ATOM	1619	HH21	ARG	170	31.615	-2.316	-17.858	1.00	0.00
	ATOM	1620	HH22	ARG	170	31.055	-0.783	-17.278	1.00	0.00
	ATOM	1621	C	ARG	170	31.201	-8.165	-16.577	1.00	25.49
30	ATOM	1622	O	ARG	170	30.132	-8.046	-17.178	1.00	28.82
	ATOM	1623	N	GLU	171	32.220	-8.866	-17.047	1.00	25.45
	ATOM	1624	H	GLU	171	32.978	-8.985	-16.448	1.00	0.00
	ATOM	1625	CA	GLU	171	32.195	-9.477	-18.364	1.00	28.63
	ATOM	1626	CB	GLU	171	33.580	-10.054	-18.735	1.00	34.71
35	ATOM	1627	CG	GLU	171	34.771	-10.040	-17.736	1.00	46.27
	ATOM	1628	CD	GLU	171	35.272	-8.696	-17.177	1.00	49.62
	ATOM	1629	OE1	GLU	171	35.099	-7.641	-17.803	1.00	49.52
	ATOM	1630	OE2	GLU	171	35.845	-8.717	-16.084	1.00	52.83
	ATOM	1631	C	GLU	171	31.154	-10.579	-18.416	1.00	24.95

	ATOM	1632	O	GLU	171	30.279	-10.593	-19.294	1.00	23.81
	ATOM	1633	N	GLU	172	31.181	-11.445	-17.405	1.00	22.24
	ATOM	1634	H	GLU	172	31.828	-11.331	-16.679	1.00	0.00
	ATOM	1635	CA	GLU	172	30.210	-12.516	-17.343	1.00	24.18
5	ATOM	1636	CB	GLU	172	30.508	-13.429	-16.192	1.00	27.98
	ATOM	1637	CG	GLU	172	31.858	-14.079	-16.392	1.00	32.11
	ATOM	1638	CD	GLU	172	32.251	-15.088	-15.337	1.00	37.30
	ATOM	1639	OE1	GLU	172	32.039	-14.841	-14.149	1.00	41.49
	ATOM	1640	OE2	GLU	172	32.785	-16.129	-15.716	1.00	45.22
10	ATOM	1641	C	GLU	172	28.797	-12.006	-17.199	1.00	26.45
	ATOM	1642	O	GLU	172	27.888	-12.558	-17.827	1.00	32.90
	ATOM	1643	N	ALA	173	28.592	-10.941	-16.416	1.00	25.95
	ATOM	1644	H	ALA	173	29.348	-10.540	-15.948	1.00	0.00
	ATOM	1645	CA	ALA	173	27.280	-10.335	-16.264	1.00	23.01
15	ATOM	1646	CB	ALA	173	27.311	-9.190	-15.242	1.00	20.11
	ATOM	1647	C	ALA	173	26.819	-9.766	-17.598	1.00	23.39
	ATOM	1648	O	ALA	173	25.661	-9.963	-17.977	1.00	25.28
	ATOM	1649	N	GLU	174	27.695	-9.077	-18.346	1.00	24.22
	ATOM	1650	H	GLU	174	28.605	-8.964	-18.004	1.00	0.00
20	ATOM	1651	CA	GLU	174	27.350	-8.542	-19.663	1.00	25.70
	ATOM	1652	CB	GLU	174	28.531	-7.822	-20.244	1.00	21.46
	ATOM	1653	CG	GLU	174	28.706	-6.545	-19.477	1.00	24.32
	ATOM	1654	CD	GLU	174	29.944	-5.776	-19.873	1.00	31.18
	ATOM	1655	OE1	GLU	174	31.017	-6.383	-20.010	1.00	37.96
25	ATOM	1656	OE2	GLU	174	29.824	-4.560	-20.021	1.00	30.27
	ATOM	1657	C	GLU	174	26.919	-9.632	-20.632	1.00	26.95
	ATOM	1658	O	GLU	174	25.868	-9.544	-21.276	1.00	27.65
	ATOM	1659	N	ARG	175	27.699	-10.711	-20.690	1.00	30.32
	ATOM	1660	H	ARG	175	28.513	-10.712	-20.144	1.00	0.00
30	ATOM	1661	CA	ARG	175	27.374	-11.870	-21.517	1.00	32.32
	ATOM	1662	CB	ARG	175	28.389	-12.991	-21.253	1.00	37.30
	ATOM	1663	CG	ARG	175	29.859	-12.688	-21.529	1.00	45.49
	ATOM	1664	CD	ARG	175	30.745	-13.832	-21.022	1.00	51.37
	ATOM	1665	NE	ARG	175	32.019	-13.336	-20.499	1.00	55.15
35	ATOM	1666	HE	ARG	175	32.252	-12.393	-20.637	1.00	0.00
	ATOM	1667	CZ	ARG	175	32.890	-14.117	-19.832	1.00	59.00
	ATOM	1668	NH1	ARG	175	32.656	-15.414	-19.599	1.00	58.66
	ATOM	1669	HH11	ARG	175	31.812	-15.837	-19.926	1.00	0.00
	ATOM	1670	HH12	ARG	175	33.332	-15.959	-19.102	1.00	0.00

	ATOM	1671	NH2	ARG	175	34.024	-13.588	-19.361	1.00	61.91
	ATOM	1672	HH21	ARG	175	34.213	-12.616	-19.502	1.00	0.00
	ATOM	1673	HH22	ARG	175	34.681	-14.160	-18.872	1.00	0.00
	ATOM	1674	C	ARG	175	25.963	-12.388	-21.213	1.00	30.27
5	ATOM	1675	O	ARG	175	25.110	-12.551	-22.088	1.00	32.04
	ATOM	1676	N	LYS	176	25.702	-12.560	-19.921	1.00	32.42
	ATOM	1677	H	LYS	176	26.414	-12.342	-19.277	1.00	0.00
	ATOM	1678	CA	LYS	176	24.452	-13.071	-19.401	1.00	32.03
	ATOM	1679	CB	LYS	176	24.531	-13.145	-17.892	1.00	35.56
10	ATOM	1680	CG	LYS	176	23.547	-14.115	-17.250	1.00	44.13
	ATOM	1681	CD	LYS	176	24.055	-15.547	-17.412	1.00	48.57
	ATOM	1682	CE	LYS	176	25.324	-15.720	-16.575	1.00	52.52
	ATOM	1683	NZ	LYS	176	25.941	-17.022	-16.754	1.00	52.83
	ATOM	1684	HZ1	LYS	176	26.298	-17.096	-17.728	1.00	0.00
15	ATOM	1685	HZ2	LYS	176	25.235	-17.766	-16.585	1.00	0.00
	ATOM	1686	HZ3	LYS	176	26.728	-17.135	-16.083	1.00	0.00
	ATOM	1687	C	LYS	176	23.285	-12.195	-19.791	1.00	31.06
	ATOM	1688	O	LYS	176	22.269	-12.672	-20.284	1.00	31.58
	ATOM	1689	N	LEU	177	23.436	-10.892	-19.595	1.00	34.11
20	ATOM	1690	H	LEU	177	24.296	-10.569	-19.251	1.00	0.00
	ATOM	1691	CA	LEU	177	22.383	-9.922	-19.855	1.00	32.25
	ATOM	1692	CB	LEU	177	22.814	-8.567	-19.282	1.00	30.73
	ATOM	1693	CG	LEU	177	22.271	-7.948	-17.963	1.00	31.54
	ATOM	1694	CD1	LEU	177	21.559	-8.933	-17.048	1.00	26.77
25	ATOM	1695	CD2	LEU	177	23.468	-7.352	-17.267	1.00	24.48
	ATOM	1696	C	LEU	177	22.080	-9.800	-21.333	1.00	32.45
	ATOM	1697	O	LEU	177	20.930	-9.592	-21.719	1.00	34.39
	ATOM	1698	N	TYR	178	23.085	-9.914	-22.199	1.00	34.48
	ATOM	1699	H	TYR	178	23.995	-10.079	-21.869	1.00	0.00
30	ATOM	1700	CA	TYR	178	22.838	-9.805	-23.628	1.00	36.68
	ATOM	1701	CB	TYR	178	24.156	-9.530	-24.341	1.00	35.30
	ATOM	1702	CG	TYR	178	24.568	-8.071	-24.223	1.00	31.08
	ATOM	1703	CD1	TYR	178	23.631	-7.081	-24.509	1.00	30.05
	ATOM	1704	CE1	TYR	178	23.995	-5.745	-24.396	1.00	30.73
35	ATOM	1705	CD2	TYR	178	25.867	-7.715	-23.825	1.00	29.53
	ATOM	1706	CE2	TYR	178	26.232	-6.366	-23.709	1.00	26.18
	ATOM	1707	CZ	TYR	178	25.282	-5.387	-23.999	1.00	25.96
	ATOM	1708	OH	TYR	178	25.580	-4.043	-23.874	1.00	25.36
	ATOM	1709	HH	TYR	178	25.002	-3.585	-24.505	1.00	0.00

	ATOM	1710	C	TYR	178	22.172	-11.038	-24.219	1.00	38.35
	ATOM	1711	O	TYR	178	21.576	-11.020	-25.307	1.00	37.60
	ATOM	1712	N	SER	179	22.300	-12.135	-23.481	1.00	40.20
	ATOM	1713	H	SER	179	22.747	-12.098	-22.611	1.00	0.00
5	ATOM	1714	CA	SER	179	21.693	-13.366	-23.885	1.00	40.95
	ATOM	1715	CB	SER	179	22.147	-14.488	-22.964	1.00	38.18
	ATOM	1716	OG	SER	179	23.552	-14.693	-23.097	1.00	42.54
	ATOM	1717	HG	SER	179	24.014	-13.865	-22.917	1.00	0.00
	ATOM	1718	C	SER	179	20.181	-13.236	-23.859	1.00	44.69
10	ATOM	1719	O	SER	179	19.507	-12.850	-22.897	1.00	43.01
	ATOM	1720	N	GLY	180	19.685	-13.487	-25.059	1.00	49.23
	ATOM	1721	H	GLY	180	20.289	-13.525	-25.832	1.00	0.00
	ATOM	1722	CA	GLY	180	18.273	-13.576	-25.269	1.00	50.39
	ATOM	1723	C	GLY	180	17.657	-12.238	-25.579	1.00	53.13
15	ATOM	1724	O	GLY	180	18.179	-11.405	-26.325	1.00	52.03
	ATOM	1725	N	ALA	181	16.551	-12.099	-24.852	1.00	55.03
	ATOM	1726	H	ALA	181	16.426	-12.708	-24.086	1.00	0.00
	ATOM	1727	CA	ALA	181	15.575	-11.041	-25.034	1.00	54.94
	ATOM	1728	CB	ALA	181	14.436	-11.279	-24.044	1.00	56.02
20	ATOM	1729	C	ALA	181	16.003	-9.584	-24.928	1.00	54.22
	ATOM	1730	O	ALA	181	15.448	-8.741	-25.638	1.00	56.20
	ATOM	1731	N	GLN	182	16.947	-9.267	-24.032	1.00	49.18
	ATOM	1732	H	GLN	182	17.366	-9.999	-23.535	1.00	0.00
	ATOM	1733	CA	GLN	182	17.430	-7.908	-23.794	1.00	44.29
25	ATOM	1734	CB	GLN	182	18.314	-7.462	-24.967	1.00	41.96
	ATOM	1735	CG	GLN	182	19.551	-8.314	-25.058	1.00	41.18
	ATOM	1736	CD	GLN	182	20.483	-7.844	-26.148	1.00	44.47
	ATOM	1737	OE1	GLN	182	20.784	-6.664	-26.295	1.00	48.23
	ATOM	1738	NE2	GLN	182	21.012	-8.740	-26.949	1.00	50.67
30	ATOM	1739	HE21	GLN	182	20.793	-9.686	-26.786	1.00	0.00
	ATOM	1740	HE22	GLN	182	21.587	-8.410	-27.662	1.00	0.00
	ATOM	1741	C	GLN	182	16.324	-6.875	-23.552	1.00	40.00
	ATOM	1742	O	GLN	182	16.323	-5.731	-24.026	1.00	41.01
	ATOM	1743	N	THR	183	15.365	-7.291	-22.735	1.00	35.70
35	ATOM	1744	H	THR	183	15.390	-8.208	-22.393	1.00	0.00
	ATOM	1745	CA	THR	183	14.255	-6.456	-22.308	1.00	33.60
	ATOM	1746	CB	THR	183	13.298	-7.378	-21.503	1.00	36.83
	ATOM	1747	OG1	THR	183	13.223	-8.626	-22.202	1.00	40.13
	ATOM	1748	HG1	THR	183	12.742	-8.509	-23.029	1.00	0.00

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	ATOM	1749	CG2	THR	183	11.906	-6.789	-21.348	1.00	38.03
	ATOM	1750	C	THR	183	14.790	-5.271	-21.471	1.00	32.43
	ATOM	1751	O	THR	183	15.797	-5.393	-20.764	1.00	30.96
	ATOM	1752	N	ASP	184	14.166	-4.091	-21.553	1.00	30.47
5	ATOM	1753	H	ASP	184	13.379	-4.025	-22.126	1.00	0.00
	ATOM	1754	CA	ASP	184	14.538	-2.916	-20.779	1.00	28.11
	ATOM	1755	CB	ASP	184	13.670	-1.722	-21.181	1.00	28.38
	ATOM	1756	CG	ASP	184	14.010	-0.944	-22.457	1.00	32.30
	ATOM	1757	OD1	ASP	184	13.124	-0.235	-22.959	1.00	29.32
10	ATOM	1758	OD2	ASP	184	15.144	-1.024	-22.938	1.00	30.40
	ATOM	1759	C	ASP	184	14.336	-3.192	-19.285	1.00	26.83
	ATOM	1760	O	ASP	184	13.322	-3.777	-18.894	1.00	24.72
	ATOM	1761	N	GLY	185	15.294	-2.826	-18.441	1.00	25.09
	ATOM	1762	H	GLY	185	16.080	-2.372	-18.798	1.00	0.00
15	ATOM	1763	CA	GLY	185	15.206	-3.060	-17.010	1.00	25.19
	ATOM	1764	C	GLY	185	15.537	-4.484	-16.606	1.00	20.65
	ATOM	1765	O	GLY	185	15.341	-4.837	-15.450	1.00	20.02
	ATOM	1766	N	LYS	186	16.048	-5.333	-17.498	1.00	21.61
	ATOM	1767	H	LYS	186	16.285	-4.995	-18.386	1.00	0.00
20	ATOM	1768	CA	LYS	186	16.388	-6.706	-17.155	1.00	21.03
	ATOM	1769	CB	LYS	186	16.592	-7.514	-18.405	1.00	22.81
	ATOM	1770	CG	LYS	186	17.021	-8.954	-18.261	1.00	23.15
	ATOM	1771	CD	LYS	186	17.304	-9.312	-19.716	1.00	24.01
	ATOM	1772	CE	LYS	186	18.073	-10.597	-19.860	1.00	25.57
25	ATOM	1773	NZ	LYS	186	18.360	-10.834	-21.258	1.00	26.92
	ATOM	1774	HZ1	LYS	186	18.897	-10.028	-21.638	1.00	0.00
	ATOM	1775	HZ2	LYS	186	17.473	-10.945	-21.789	1.00	0.00
	ATOM	1776	HZ3	LYS	186	18.932	-11.698	-21.346	1.00	0.00
	ATOM	1777	C	LYS	186	17.678	-6.569	-16.401	1.00	20.18
30	ATOM	1778	O	LYS	186	18.632	-5.993	-16.932	1.00	22.74
	ATOM	1779	N	PHE	187	17.736	-7.127	-15.209	1.00	18.17
	ATOM	1780	H	PHE	187	17.018	-7.724	-14.905	1.00	0.00
	ATOM	1781	CA	PHE	187	18.835	-6.825	-14.323	1.00	15.32
	ATOM	1782	CB	PHE	187	18.343	-5.741	-13.341	1.00	13.75
35	ATOM	1783	CG	PHE	187	17.375	-6.215	-12.254	1.00	10.60
	ATOM	1784	CD1	PHE	187	17.851	-6.516	-10.963	1.00	4.59
	ATOM	1785	CD2	PHE	187	16.027	-6.375	-12.550	1.00	6.32
	ATOM	1786	CE1	PHE	187	16.975	-6.978	-10.000	1.00	3.69
	ATOM	1787	CE2	PHE	187	15.161	-6.840	-11.564	1.00	8.44

	ATOM	1788	CZ	PHE	187	15.630	-7.146	-10.294	1.00	5.46
	ATOM	1789	C	PHE	187	19.404	-7.979	-13.538	1.00	12.65
	ATOM	1790	O	PHE	187	18.770	-9.031	-13.434	1.00	19.75
	ATOM	1791	N	LEU	188	20.550	-7.750	-12.906	1.00	11.33
5	ATOM	1792	H	LEU	188	21.054	-6.926	-13.096	1.00	0.00
	ATOM	1793	CA	LEU	188	21.065	-8.647	-11.899	1.00	11.79
	ATOM	1794	CB	LEU	188	21.938	-9.744	-12.521	1.00	15.47
	ATOM	1795	CG	LEU	188	23.210	-9.476	-13.324	1.00	15.83
	ATOM	1796	CD1	LEU	188	24.466	-9.304	-12.465	1.00	8.89
10	ATOM	1797	CD2	LEU	188	23.364	-10.695	-14.223	1.00	13.24
	ATOM	1798	C	LEU	188	21.892	-7.837	-10.908	1.00	13.76
	ATOM	1799	O	LEU	188	22.306	-6.706	-11.206	1.00	9.67
	ATOM	1800	N	LEU	189	22.156	-8.386	-9.726	1.00	11.91
	ATOM	1801	H	LEU	189	21.844	-9.295	-9.525	1.00	0.00
15	ATOM	1802	CA	LEU	189	23.002	-7.720	-8.770	1.00	11.04
	ATOM	1803	CB	LEU	189	22.139	-7.371	-7.533	1.00	10.60
	ATOM	1804	CG	LEU	189	22.718	-6.409	-6.467	1.00	10.76
	ATOM	1805	CD1	LEU	189	21.591	-5.775	-5.699	1.00	16.31
	ATOM	1806	CD2	LEU	189	23.580	-7.144	-5.462	1.00	11.36
20	ATOM	1807	C	LEU	189	24.090	-8.751	-8.511	1.00	10.52
	ATOM	1808	O	LEU	189	23.821	-9.956	-8.487	1.00	15.16
	ATOM	1809	N	ARG	190	25.335	-8.355	-8.354	1.00	9.93
	ATOM	1810	H	ARG	190	25.548	-7.398	-8.329	1.00	0.00
	ATOM	1811	CA	ARG	190	26.417	-9.296	-8.148	1.00	15.26
25	ATOM	1812	CB	ARG	190	27.158	-9.565	-9.487	1.00	19.74
	ATOM	1813	CG	ARG	190	27.523	-8.309	-10.276	1.00	18.73
	ATOM	1814	CD	ARG	190	28.210	-8.529	-11.615	1.00	19.13
	ATOM	1815	NE	ARG	190	28.258	-7.264	-12.327	1.00	15.71
	ATOM	1816	HE	ARG	190	27.488	-7.013	-12.880	1.00	0.00
30	ATOM	1817	CZ	ARG	190	29.300	-6.427	-12.264	1.00	12.44
	ATOM	1818	NH1	ARG	190	30.398	-6.661	-11.557	1.00	12.24
	ATOM	1819	HH11	ARG	190	30.484	-7.501	-11.020	1.00	0.00
	ATOM	1820	HH12	ARG	190	31.138	-5.988	-11.551	1.00	0.00
	ATOM	1821	NH2	ARG	190	29.204	-5.265	-12.874	1.00	19.14
35	ATOM	1822	HH21	ARG	190	28.357	-5.038	-13.349	1.00	0.00
	ATOM	1823	HH22	ARG	190	29.953	-4.608	-12.846	1.00	0.00
	ATOM	1824	C	ARG	190	27.363	-8.675	-7.128	1.00	17.85
	ATOM	1825	O	ARG	190	27.428	-7.441	-7.051	1.00	17.12
	ATOM	1826	N	PRO	191	28.063	-9.426	-6.269	1.00	19.25

	ATOM	1827	CD	PRO	191	27.823	-10.832	-5.993	1.00	15.67
	ATOM	1828	CA	PRO	191	29.087	-8.896	-5.386	1.00	18.77
	ATOM	1829	CB	PRO	191	29.348	-9.996	-4.377	1.00	17.25
	ATOM	1830	CG	PRO	191	29.015	-11.250	-5.129	1.00	13.46
5	ATOM	1831	C	PRO	191	30.314	-8.517	-6.174	1.00	22.81
	ATOM	1832	O	PRO	191	30.605	-9.074	-7.241	1.00	22.89
	ATOM	1833	N	ARG	192	31.057	-7.551	-5.672	1.00	25.23
	ATOM	1834	H	ARG	192	30.882	-7.165	-4.790	1.00	0.00
	ATOM	1835	CA	ARG	192	32.254	-7.192	-6.372	1.00	27.78
10	ATOM	1836	CB	ARG	192	32.321	-5.708	-6.573	1.00	23.97
	ATOM	1837	CG	ARG	192	31.329	-5.258	-7.639	1.00	20.97
	ATOM	1838	CD	ARG	192	31.708	-3.925	-8.249	1.00	21.89
	ATOM	1839	NE	ARG	192	32.301	-3.053	-7.259	1.00	29.17
	ATOM	1840	HE	ARG	192	31.803	-2.865	-6.436	1.00	0.00
15	ATOM	1841	CZ	ARG	192	33.503	-2.487	-7.403	1.00	33.01
	ATOM	1842	NH1	ARG	192	34.277	-2.657	-8.478	1.00	27.14
	ATOM	1843	HH11	ARG	192	33.966	-3.223	-9.241	1.00	0.00
	ATOM	1844	HH12	ARG	192	35.166	-2.200	-8.525	1.00	0.00
	ATOM	1845	NH2	ARG	192	33.960	-1.776	-6.376	1.00	40.84
20	ATOM	1846	HH21	ARG	192	33.406	-1.692	-5.548	1.00	0.00
	ATOM	1847	HH22	ARG	192	34.853	-1.330	-6.427	1.00	0.00
	ATOM	1848	C	ARG	192	33.425	-7.668	-5.557	1.00	34.57
	ATOM	1849	O	ARG	192	33.324	-7.845	-4.339	1.00	37.12
	ATOM	1850	N	LYS	193	34.526	-7.881	-6.289	1.00	42.26
25	ATOM	1851	H	LYS	193	34.467	-7.655	-7.245	1.00	0.00
	ATOM	1852	CA	LYS	193	35.795	-8.403	-5.795	1.00	47.15
	ATOM	1853	CB	LYS	193	36.904	-8.081	-6.793	1.00	52.06
	ATOM	1854	CG	LYS	193	36.997	-8.876	-8.091	1.00	54.92
	ATOM	1855	CD	LYS	193	38.281	-8.541	-8.878	1.00	55.99
30	ATOM	1856	CE	LYS	193	39.618	-8.936	-8.217	1.00	58.17
	ATOM	1857	NZ	LYS	193	40.052	-8.033	-7.156	1.00	59.70
	ATOM	1858	HZ1	LYS	193	39.351	-8.030	-6.388	1.00	0.00
	ATOM	1859	HZ2	LYS	193	40.147	-7.069	-7.537	1.00	0.00
	ATOM	1860	HZ3	LYS	193	40.973	-8.345	-6.784	1.00	0.00
35	ATOM	1861	C	LYS	193	36.264	-7.923	-4.427	1.00	48.59
	ATOM	1862	O	LYS	193	36.714	-8.701	-3.585	1.00	48.16
	ATOM	1863	N	GLU	194	36.139	-6.621	-4.202	1.00	48.68
	ATOM	1864	H	GLU	194	35.613	-6.112	-4.842	1.00	0.00
	ATOM	1865	CA	GLU	194	36.536	-5.982	-2.962	1.00	52.35

	ATOM	1866	CB	GLU	194	36.997	-4.537	-3.272	1.00	55.36
	ATOM	1867	CG	GLU	194	36.171	-3.649	-4.234	1.00	57.27
	ATOM	1868	CD	GLU	194	36.365	-3.891	-5.731	1.00	56.04
	ATOM	1869	OE1	GLU	194	37.277	-3.298	-6.310	1.00	56.94
5	ATOM	1870	OE2	GLU	194	35.595	-4.652	-6.319	1.00	54.29
	ATOM	1871	C	GLU	194	35.267	-6.045	-2.121	1.00	52.06
	ATOM	1872	O	GLU	194	34.474	-5.109	-2.048	1.00	51.19
	ATOM	1873	N	GLN	195	35.081	-7.232	-1.545	1.00	54.38
	ATOM	1874	H	GLN	195	35.805	-7.885	-1.636	1.00	0.00
10	ATOM	1875	CA	GLN	195	33.858	-7.619	-0.850	1.00	55.92
	ATOM	1876	CB	GLN	195	34.139	-8.895	-0.051	1.00	59.23
	ATOM	1877	CG	GLN	195	34.284	-10.113	-0.980	1.00	61.52
	ATOM	1878	CD	GLN	195	33.058	-10.451	-1.830	1.00	63.22
	ATOM	1879	OE1	GLN	195	31.897	-10.254	-1.457	1.00	66.50
15	ATOM	1880	NE2	GLN	195	33.269	-11.005	-3.011	1.00	64.00
	ATOM	1881	HE21	GLN	195	34.194	-11.170	-3.287	1.00	0.00
	ATOM	1882	HE22	GLN	195	32.482	-11.228	-3.547	1.00	0.00
	ATOM	1883	C	GLN	195	33.171	-6.599	0.039	1.00	52.83
	ATOM	1884	O	GLN	195	33.784	-5.715	0.646	1.00	54.52
20	ATOM	1885	N	GLY	196	31.851	-6.727	0.086	1.00	48.51
	ATOM	1886	H	GLY	196	31.410	-7.490	-0.347	1.00	0.00
	ATOM	1887	CA	GLY	196	31.058	-5.704	0.734	1.00	43.01
	ATOM	1888	C	GLY	196	30.677	-4.644	-0.298	1.00	38.41
	ATOM	1889	O	GLY	196	29.901	-3.742	0.029	1.00	39.57
25	ATOM	1890	N	THR	197	31.232	-4.650	-1.524	1.00	34.03
	ATOM	1891	H	THR	197	31.954	-5.266	-1.758	1.00	0.00
	ATOM	1892	CA	THR	197	30.740	-3.783	-2.574	1.00	26.80
	ATOM	1893	CB	THR	197	31.858	-3.075	-3.375	1.00	27.15
	ATOM	1894	OG1	THR	197	32.759	-4.048	-3.873	1.00	29.46
30	ATOM	1895	HG1	THR	197	33.343	-4.272	-3.145	1.00	0.00
	ATOM	1896	CG2	THR	197	32.554	-2.032	-2.514	1.00	27.29
	ATOM	1897	C	THR	197	29.972	-4.717	-3.498	1.00	24.98
	ATOM	1898	O	THR	197	30.181	-5.945	-3.493	1.00	23.20
	ATOM	1899	N	TYR	198	29.030	-4.130	-4.243	1.00	21.47
35	ATOM	1900	H	TYR	198	28.957	-3.149	-4.246	1.00	0.00
	ATOM	1901	CA	TYR	198	28.129	-4.849	-5.118	1.00	18.56
	ATOM	1902	CB	TYR	198	26.753	-5.073	-4.426	1.00	12.78
	ATOM	1903	CG	TYR	198	26.823	-5.927	-3.146	1.00	22.01
	ATOM	1904	CD1	TYR	198	27.142	-5.362	-1.895	1.00	20.02

	ATOM	1905	CE1	TYR	198	27.264	-6.166	-0.747	1.00	22.60
	ATOM	1906	CD2	TYR	198	26.618	-7.306	-3.214	1.00	19.95
	ATOM	1907	CE2	TYR	198	26.741	-8.114	-2.071	1.00	25.51
	ATOM	1908	CZ	TYR	198	27.065	-7.544	-0.837	1.00	23.70
5	ATOM	1909	OH	TYR	198	27.201	-8.359	0.286	1.00	31.49
	ATOM	1910	HH	TYR	198	27.735	-9.132	0.008	1.00	0.00
	ATOM	1911	C	TYR	198	27.965	-3.975	-6.365	1.00	21.17
	ATOM	1912	O	TYR	198	28.322	-2.782	-6.377	1.00	18.78
	ATOM	1913	N	ALA	199	27.514	-4.574	-7.465	1.00	17.77
10	ATOM	1914	H	ALA	199	27.340	-5.539	-7.472	1.00	0.00
	ATOM	1915	CA	ALA	199	27.203	-3.802	-8.639	1.00	17.47
	ATOM	1916	CB	ALA	199	28.194	-4.003	-9.768	1.00	16.18
	ATOM	1917	C	ALA	199	25.877	-4.356	-9.092	1.00	18.13
	ATOM	1918	O	ALA	199	25.602	-5.564	-8.991	1.00	22.08
15	ATOM	1919	N	LEU	200	25.047	-3.427	-9.530	1.00	14.97
	ATOM	1920	H	LEU	200	25.351	-2.496	-9.531	1.00	0.00
	ATOM	1921	CA	LEU	200	23.747	-3.719	-10.080	1.00	17.06
	ATOM	1922	CB	LEU	200	22.780	-2.719	-9.450	1.00	12.56
	ATOM	1923	CG	LEU	200	21.249	-2.769	-9.466	1.00	21.69
20	ATOM	1924	CD1	LEU	200	20.765	-1.518	-10.193	1.00	17.31
	ATOM	1925	CD2	LEU	200	20.710	-4.042	-10.105	1.00	16.41
	ATOM	1926	C	LEU	200	23.964	-3.527	-11.591	1.00	15.53
	ATOM	1927	O	LEU	200	24.416	-2.467	-12.025	1.00	11.97
	ATOM	1928	N	SER	201	23.746	-4.526	-12.434	1.00	17.37
25	ATOM	1929	H	SER	201	23.328	-5.350	-12.112	1.00	0.00
	ATOM	1930	CA	SER	201	23.939	-4.381	-13.867	1.00	18.19
	ATOM	1931	CB	SER	201	24.899	-5.455	-14.323	1.00	15.29
	ATOM	1932	OG	SER	201	26.098	-5.406	-13.557	1.00	13.30
	ATOM	1933	HG	SER	201	25.836	-5.633	-12.651	1.00	0.00
30	ATOM	1934	C	SER	201	22.594	-4.535	-14.549	1.00	16.35
	ATOM	1935	O	SER	201	21.864	-5.452	-14.163	1.00	17.51
	ATOM	1936	N	LEU	202	22.194	-3.704	-15.513	1.00	20.48
	ATOM	1937	H	LEU	202	22.784	-2.981	-15.814	1.00	0.00
	ATOM	1938	CA	LEU	202	20.906	-3.879	-16.184	1.00	20.46
35	ATOM	1939	CB	LEU	202	19.826	-2.932	-15.635	1.00	19.55
	ATOM	1940	CG	LEU	202	19.923	-1.415	-15.745	1.00	20.47
	ATOM	1941	CD1	LEU	202	18.554	-0.802	-15.515	1.00	26.80
	ATOM	1942	CD2	LEU	202	20.906	-0.888	-14.726	1.00	24.17
	ATOM	1943	C	LEU	202	20.997	-3.636	-17.679	1.00	24.32

	ATOM	1944	O	LEU	202	22.026	-3.156	-18.168	1.00	22.66
	ATOM	1945	N	ILE	203	19.929	-3.998	-18.393	1.00	25.50
	ATOM	1946	H	ILE	203	19.187	-4.430	-17.925	1.00	0.00
	ATOM	1947	CA	ILE	203	19.801	-3.775	-19.817	1.00	23.41
5	ATOM	1948	CB	ILE	203	19.185	-5.025	-20.488	1.00	24.34
	ATOM	1949	CG2	ILE	203	18.668	-4.683	-21.880	1.00	29.27
	ATOM	1950	CG1	ILE	203	20.225	-6.114	-20.595	1.00	20.19
	ATOM	1951	CD	ILE	203	21.302	-5.877	-21.688	1.00	27.26
	ATOM	1952	C	ILE	203	18.902	-2.567	-20.030	1.00	24.65
10	ATOM	1953	O	ILE	203	17.835	-2.440	-19.411	1.00	26.06
	ATOM	1954	N	TYR	204	19.326	-1.667	-20.901	1.00	23.00
	ATOM	1955	H	TYR	204	20.252	-1.690	-21.219	1.00	0.00
	ATOM	1956	CA	TYR	204	18.505	-0.566	-21.310	1.00	22.39
	ATOM	1957	CB	TYR	204	18.691	0.638	-20.392	1.00	23.53
15	ATOM	1958	CG	TYR	204	17.817	1.779	-20.871	1.00	19.38
	ATOM	1959	CD1	TYR	204	16.435	1.597	-20.888	1.00	21.27
	ATOM	1960	CE1	TYR	204	15.613	2.589	-21.400	1.00	23.27
	ATOM	1961	CD2	TYR	204	18.389	2.952	-21.353	1.00	17.37
	ATOM	1962	CE2	TYR	204	17.566	3.946	-21.872	1.00	20.74
20	ATOM	1963	CZ	TYR	204	16.189	3.749	-21.888	1.00	22.21
	ATOM	1964	OH	TYR	204	15.364	4.701	-22.428	1.00	35.35
	ATOM	1965	HH	TYR	204	15.823	5.551	-22.421	1.00	0.00
	ATOM	1966	C	TYR	204	18.951	-0.202	-22.712	1.00	24.33
	ATOM	1967	O	TYR	204	20.108	0.141	-22.948	1.00	23.64
25	ATOM	1968	N	GLY	205	18.035	-0.296	-23.672	1.00	27.09
	ATOM	1969	H	GLY	205	17.167	-0.691	-23.456	1.00	0.00
	ATOM	1970	CA	GLY	205	18.331	0.022	-25.063	1.00	28.04
	ATOM	1971	C	GLY	205	19.445	-0.886	-25.568	1.00	28.26
	ATOM	1972	O	GLY	205	20.434	-0.425	-26.129	1.00	29.56
30	ATOM	1973	N	LYS	206	19.310	-2.183	-25.274	1.00	30.20
	ATOM	1974	H	LYS	206	18.469	-2.463	-24.853	1.00	0.00
	ATOM	1975	CA	LYS	206	20.310	-3.204	-25.576	1.00	30.88
	ATOM	1976	CB	LYS	206	20.348	-3.437	-27.106	1.00	39.67
	ATOM	1977	CG	LYS	206	19.208	-4.284	-27.668	1.00	46.40
35	ATOM	1978	CD	LYS	206	19.427	-4.533	-29.171	1.00	58.59
	ATOM	1979	CE	LYS	206	18.857	-5.858	-29.733	1.00	59.73
	ATOM	1980	NZ	LYS	206	17.414	-5.981	-29.599	1.00	60.63
	ATOM	1981	HZ1	LYS	206	17.100	-6.871	-30.034	1.00	0.00
	ATOM	1982	HZ2	LYS	206	16.942	-5.181	-30.067	1.00	0.00

	ATOM	1983	HZ3	LYS	206	17.164	-5.984	-28.588	1.00	0.00
	ATOM	1984	C	LYS	206	21.713	-2.885	-25.048	1.00	27.65
	ATOM	1985	O	LYS	206	22.715	-3.453	-25.484	1.00	26.71
	ATOM	1986	N	THR	207	21.854	-1.988	-24.075	1.00	27.08
5	ATOM	1987	H	THR	207	21.093	-1.475	-23.736	1.00	0.00
	ATOM	1988	CA	THR	207	23.157	-1.686	-23.497	1.00	29.48
	ATOM	1989	CB	THR	207	23.513	-0.193	-23.705	1.00	26.97
	ATOM	1990	OG1	THR	207	23.486	0.043	-25.101	1.00	30.98
	ATOM	1991	HG1	THR	207	22.576	-0.039	-25.421	1.00	0.00
10	ATOM	1992	CG2	THR	207	24.897	0.172	-23.191	1.00	21.13
	ATOM	1993	C	THR	207	23.126	-2.009	-22.006	1.00	31.62
	ATOM	1994	O	THR	207	22.104	-1.825	-21.322	1.00	29.33
	ATOM	1995	N	VAL	208	24.243	-2.586	-21.544	1.00	32.82
	ATOM	1996	H	VAL	208	24.986	-2.778	-22.157	1.00	0.00
15	ATOM	1997	CA	VAL	208	24.418	-2.923	-20.146	1.00	27.75
	ATOM	1998	CB	VAL	208	25.352	-4.142	-19.988	1.00	26.11
	ATOM	1999	CG1	VAL	208	25.598	-4.433	-18.520	1.00	25.10
	ATOM	2000	CG2	VAL	208	24.688	-5.371	-20.555	1.00	21.70
	ATOM	2001	C	VAL	208	25.030	-1.705	-19.479	1.00	26.14
20	ATOM	2002	O	VAL	208	26.021	-1.153	-19.973	1.00	24.51
	ATOM	2003	N	TYR	209	24.398	-1.315	-18.369	1.00	24.22
	ATOM	2004	H	TYR	209	23.600	-1.825	-18.102	1.00	0.00
	ATOM	2005	CA	TYR	209	24.819	-0.206	-17.528	1.00	20.40
	ATOM	2006	CB	TYR	209	23.703	0.788	-17.413	1.00	21.23
25	ATOM	2007	CG	TYR	209	23.419	1.508	-18.712	1.00	25.84
	ATOM	2008	CD1	TYR	209	24.275	2.526	-19.114	1.00	27.02
	ATOM	2009	CE1	TYR	209	24.025	3.264	-20.261	1.00	30.87
	ATOM	2010	CD2	TYR	209	22.293	1.197	-19.473	1.00	25.74
	ATOM	2011	CE2	TYR	209	22.033	1.929	-20.630	1.00	33.37
30	ATOM	2012	CZ	TYR	209	22.899	2.958	-21.010	1.00	34.59
	ATOM	2013	OH	TYR	209	22.636	3.699	-22.143	1.00	43.26
	ATOM	2014	HH	TYR	209	22.811	4.641	-21.974	1.00	0.00
	ATOM	2015	C	TYR	209	25.151	-0.751	-16.144	1.00	18.17
	ATOM	2016	O	TYR	209	24.410	-1.594	-15.633	1.00	17.18
35	ATOM	2017	N	HIS	210	26.256	-0.371	-15.515	1.00	17.72
	ATOM	2018	H	HIS	210	26.826	0.337	-15.894	1.00	0.00
	ATOM	2019	CA	HIS	210	26.609	-0.918	-14.218	1.00	19.24
	ATOM	2020	CB	HIS	210	28.008	-1.531	-14.215	1.00	21.16
	ATOM	2021	CG	HIS	210	28.135	-2.724	-15.153	1.00	23.97

	ATOM	2022	CD2	HIS	210	28.543	-2.656	-16.468	1.00	24.36
	ATOM	2023	ND1	HIS	210	27.881	-3.996	-14.891	1.00	22.98
	ATOM	2024	HD1	HIS	210	27.529	-4.364	-14.052	1.00	0.00
	ATOM	2025	CE1	HIS	210	28.110	-4.701	-15.967	1.00	22.54
5	ATOM	2026	NE2	HIS	210	28.506	-3.884	-16.907	1.00	21.56
	ATOM	2027	HE2	HIS	210	28.750	-4.161	-17.817	1.00	0.00
	ATOM	2028	C	HIS	210	26.581	0.172	-13.181	1.00	18.72
	ATOM	2029	O	HIS	210	27.158	1.225	-13.437	1.00	17.56
	ATOM	2030	N	TYR	211	25.888	-0.025	-12.059	1.00	17.28
10	ATOM	2031	H	TYR	211	25.420	-0.876	-11.933	1.00	0.00
	ATOM	2032	CA	TYR	211	25.817	0.927	-10.966	1.00	15.79
	ATOM	2033	CB	TYR	211	24.404	1.190	-10.547	1.00	10.05
	ATOM	2034	CG	TYR	211	23.724	2.032	-11.583	1.00	12.14
	ATOM	2035	CD1	TYR	211	23.025	1.419	-12.615	1.00	14.77
15	ATOM	2036	CE1	TYR	211	22.378	2.205	-13.576	1.00	17.95
	ATOM	2037	CD2	TYR	211	23.793	3.422	-11.497	1.00	13.82
	ATOM	2038	CE2	TYR	211	23.146	4.214	-12.450	1.00	14.13
	ATOM	2039	CZ	TYR	211	22.440	3.600	-13.487	1.00	17.28
	ATOM	2040	OH	TYR	211	21.765	4.360	-14.428	1.00	14.60
20	ATOM	2041	HH	TYR	211	22.097	5.271	-14.394	1.00	0.00
	ATOM	2042	C	TYR	211	26.528	0.305	-9.795	1.00	17.49
	ATOM	2043	O	TYR	211	26.389	-0.900	-9.552	1.00	20.48
	ATOM	2044	N	LEU	212	27.312	1.111	-9.090	1.00	17.95
	ATOM	2045	H	LEU	212	27.306	2.074	-9.285	1.00	0.00
25	ATOM	2046	CA	LEU	212	28.100	0.653	-7.961	1.00	15.94
	ATOM	2047	CB	LEU	212	29.274	1.590	-7.816	1.00	16.35
	ATOM	2048	CG	LEU	212	30.459	1.166	-7.014	1.00	17.69
	ATOM	2049	CD1	LEU	212	30.986	-0.162	-7.495	1.00	21.17
	ATOM	2050	CD2	LEU	212	31.528	2.213	-7.189	1.00	23.05
30	ATOM	2051	C	LEU	212	27.230	0.663	-6.724	1.00	15.43
	ATOM	2052	O	LEU	212	26.326	1.493	-6.647	1.00	17.00
	ATOM	2053	N	ILE	213	27.397	-0.243	-5.765	1.00	14.45
	ATOM	2054	H	ILE	213	28.088	-0.934	-5.854	1.00	0.00
	ATOM	2055	CA	ILE	213	26.591	-0.197	-4.566	1.00	12.29
35	ATOM	2056	CB	ILE	213	25.504	-1.310	-4.579	1.00	10.74
	ATOM	2057	CG2	ILE	213	24.772	-1.292	-3.234	1.00	8.99
	ATOM	2058	CG1	ILE	213	24.504	-1.100	-5.725	1.00	9.15
	ATOM	2059	CD	ILE	213	23.386	-2.155	-5.837	1.00	2.00
	ATOM	2060	C	ILE	213	27.581	-0.409	-3.440	1.00	12.99

	ATOM	2061	O	ILE	213	28.458	-1.266	-3.511	1.00	13.44
	ATOM	2062	N	SER	214	27.539	0.409	-2.406	1.00	15.58
	ATOM	2063	H	SER	214	26.849	1.103	-2.368	1.00	0.00
	ATOM	2064	CA	SER	214	28.435	0.266	-1.286	1.00	18.78
5	ATOM	2065	CB	SER	214	29.515	1.352	-1.367	1.00	18.30
	ATOM	2066	OG	SER	214	30.131	1.374	-2.657	1.00	26.17
	ATOM	2067	HG	SER	214	29.992	0.512	-3.070	1.00	0.00
	ATOM	2068	C	SER	214	27.595	0.401	-0.020	1.00	21.15
	ATOM	2069	O	SER	214	26.462	0.921	0.001	1.00	18.71
10	ATOM	2070	N	GLN	215	28.159	-0.172	1.035	1.00	23.98
	ATOM	2071	H	GLN	215	29.053	-0.568	0.974	1.00	0.00
	ATOM	2072	CA	GLN	215	27.546	-0.162	2.338	1.00	28.50
	ATOM	2073	CB	GLN	215	27.528	-1.599	2.792	1.00	22.80
	ATOM	2074	CG	GLN	215	26.814	-1.698	4.085	1.00	25.14
15	ATOM	2075	CD	GLN	215	26.746	-3.095	4.636	1.00	29.02
	ATOM	2076	OE1	GLN	215	27.642	-3.924	4.521	1.00	34.28
	ATOM	2077	NE2	GLN	215	25.627	-3.395	5.265	1.00	30.80
	ATOM	2078	HE21	GLN	215	24.898	-2.740	5.289	1.00	0.00
	ATOM	2079	HE22	GLN	215	25.607	-4.263	5.713	1.00	0.00
20	ATOM	2080	C	GLN	215	28.362	0.757	3.262	1.00	33.95
	ATOM	2081	O	GLN	215	29.604	0.709	3.248	1.00	36.63
	ATOM	2082	N	ASP	216	27.723	1.654	4.016	1.00	34.60
	ATOM	2083	H	ASP	216	26.758	1.767	3.899	1.00	0.00
	ATOM	2084	CA	ASP	216	28.456	2.492	4.953	1.00	40.28
25	ATOM	2085	CB	ASP	216	27.723	3.833	5.154	1.00	43.67
	ATOM	2086	CG	ASP	216	26.240	3.802	5.557	1.00	45.13
	ATOM	2087	OD1	ASP	216	25.830	2.926	6.315	1.00	44.28
	ATOM	2088	OD2	ASP	216	25.488	4.673	5.118	1.00	44.20
	ATOM	2089	C	ASP	216	28.625	1.783	6.295	1.00	43.90
30	ATOM	2090	O	ASP	216	27.872	0.851	6.578	1.00	47.97
	ATOM	2091	N	LYS	217	29.514	2.220	7.201	1.00	45.32
	ATOM	2092	H	LYS	217	30.087	2.958	6.916	1.00	0.00
	ATOM	2093	CA	LYS	217	29.754	1.599	8.517	1.00	41.99
	ATOM	2094	CB	LYS	217	30.698	2.467	9.376	1.00	42.40
35	ATOM	2095	CG	LYS	217	30.279	3.912	9.649	1.00	46.37
	ATOM	2096	CD	LYS	217	30.563	4.860	8.484	1.00	46.52
	ATOM	2097	CE	LYS	217	29.906	6.201	8.735	1.00	48.92
	ATOM	2098	NZ	LYS	217	30.394	7.190	7.799	1.00	49.37
	ATOM	2099	HZ1	LYS	217	30.186	6.881	6.828	1.00	0.00

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	ATOM	2100	HZ2	LYS	217	31.422	7.301	7.916	1.00	0.00
	ATOM	2101	HZ3	LYS	217	29.924	8.099	7.985	1.00	0.00
	ATOM	2102	C	LYS	217	28.518	1.306	9.356	1.00	39.51
	ATOM	2103	O	LYS	217	28.443	0.314	10.088	1.00	36.58
5	ATOM	2104	N	ALA	218	27.521	2.178	9.183	1.00	38.15
	ATOM	2105	H	ALA	218	27.665	2.928	8.576	1.00	0.00
	ATOM	2106	CA	ALA	218	26.221	2.054	9.829	1.00	36.79
	ATOM	2107	CB	ALA	218	25.535	3.423	9.784	1.00	34.86
	ATOM	2108	C	ALA	218	25.314	0.991	9.178	1.00	35.43
10	ATOM	2109	O	ALA	218	24.112	0.914	9.449	1.00	34.77
	ATOM	2110	N	GLY	219	25.840	0.184	8.255	1.00	32.78
	ATOM	2111	H	GLY	219	26.777	0.284	8.010	1.00	0.00
	ATOM	2112	CA	GLY	219	25.102	-0.907	7.644	1.00	30.47
	ATOM	2113	C	GLY	219	24.190	-0.554	6.484	1.00	26.67
15	ATOM	2114	O	GLY	219	23.627	-1.481	5.904	1.00	27.94
	ATOM	2115	N	LYS	220	24.069	0.703	6.077	1.00	21.58
	ATOM	2116	H	LYS	220	24.534	1.383	6.592	1.00	0.00
	ATOM	2117	CA	LYS	220	23.171	1.111	5.001	1.00	18.65
	ATOM	2118	CB	LYS	220	22.620	2.478	5.324	1.00	19.50
20	ATOM	2119	CG	LYS	220	21.841	2.359	6.621	1.00	24.09
	ATOM	2120	CD	LYS	220	21.455	3.712	7.137	1.00	29.01
	ATOM	2121	CE	LYS	220	20.193	4.202	6.464	1.00	34.13
	ATOM	2122	NZ	LYS	220	19.009	3.547	6.978	1.00	33.94
	ATOM	2123	HZ1	LYS	220	18.175	4.046	6.615	1.00	0.00
25	ATOM	2124	HZ2	LYS	220	19.007	3.607	8.017	1.00	0.00
	ATOM	2125	HZ3	LYS	220	18.983	2.550	6.684	1.00	0.00
	ATOM	2126	C	LYS	220	23.772	1.126	3.609	1.00	14.52
	ATOM	2127	O	LYS	220	24.863	1.647	3.367	1.00	14.63
	ATOM	2128	N	TYR	221	23.019	0.538	2.695	1.00	9.58
30	ATOM	2129	H	TYR	221	22.127	0.234	2.956	1.00	0.00
	ATOM	2130	CA	TYR	221	23.425	0.359	1.315	1.00	10.18
	ATOM	2131	CB	TYR	221	22.866	-0.930	0.735	1.00	10.07
	ATOM	2132	CG	TYR	221	23.293	-2.194	1.445	1.00	7.80
	ATOM	2133	CD1	TYR	221	22.523	-2.686	2.492	1.00	12.85
35	ATOM	2134	CE1	TYR	221	22.859	-3.901	3.088	1.00	17.08
	ATOM	2135	CD2	TYR	221	24.411	-2.891	1.000	1.00	9.44
	ATOM	2136	CE2	TYR	221	24.755	-4.104	1.596	1.00	18.12
	ATOM	2137	CZ	TYR	221	23.969	-4.609	2.635	1.00	18.06
	ATOM	2138	OH	TYR	221	24.244	-5.857	3.182	1.00	27.12

	ATOM	2139	HH	TYR	221	24.730	-5.725	4.011	1.00	0.00
	ATOM	2140	C	TYR	221	22.930	1.477	0.439	1.00	9.37
	ATOM	2141	O	TYR	221	21.825	2.001	0.636	1.00	8.55
	ATOM	2142	N	CYS	222	23.749	1.842	-0.528	1.00	10.43
5	ATOM	2143	H	CYS	222	24.666	1.495	-0.600	1.00	0.00
	ATOM	2144	CA	CYS	222	23.333	2.838	-1.489	1.00	13.36
	ATOM	2145	CB	CYS	222	23.355	4.241	-0.865	1.00	8.71
	ATOM	2146	SG	CYS	222	24.969	4.951	-0.501	1.00	10.62
	ATOM	2147	C	CYS	222	24.254	2.809	-2.697	1.00	13.50
10	ATOM	2148	O	CYS	222	25.380	2.292	-2.653	1.00	14.26
	ATOM	2149	N	ILE	223	23.725	3.267	-3.824	1.00	16.58
	ATOM	2150	H	ILE	223	22.785	3.537	-3.825	1.00	0.00
	ATOM	2151	CA	ILE	223	24.519	3.485	-5.026	1.00	17.67
	ATOM	2152	CB	ILE	223	23.572	3.587	-6.273	1.00	21.79
15	ATOM	2153	CG2	ILE	223	24.356	3.926	-7.550	1.00	19.55
	ATOM	2154	CG1	ILE	223	22.849	2.257	-6.436	1.00	20.47
	ATOM	2155	CD	ILE	223	21.823	2.181	-7.581	1.00	25.28
	ATOM	2156	C	ILE	223	25.198	4.818	-4.710	1.00	15.39
	ATOM	2157	O	ILE	223	24.544	5.635	-4.036	1.00	13.54
20	ATOM	2158	N	PRO	224	26.451	5.139	-5.094	1.00	16.61
	ATOM	2159	CD	PRO	224	27.410	4.262	-5.761	1.00	11.44
	ATOM	2160	CA	PRO	224	27.092	6.417	-4.799	1.00	19.91
	ATOM	2161	CB	PRO	224	28.376	6.383	-5.626	1.00	19.31
	ATOM	2162	CG	PRO	224	28.751	4.926	-5.508	1.00	17.17
25	ATOM	2163	C	PRO	224	26.176	7.590	-5.112	1.00	22.71
	ATOM	2164	O	PRO	224	25.757	7.771	-6.260	1.00	25.97
	ATOM	2165	N	GLU	225	25.830	8.255	-3.999	1.00	22.58
	ATOM	2166	H	GLU	225	26.153	7.878	-3.160	1.00	0.00
	ATOM	2167	CA	GLU	225	24.988	9.443	-3.895	1.00	19.95
30	ATOM	2168	CB	GLU	225	25.333	10.437	-5.051	1.00	28.14
	ATOM	2169	CG	GLU	225	26.809	10.930	-5.182	1.00	38.98
	ATOM	2170	CD	GLU	225	27.461	10.929	-6.588	1.00	44.42
	ATOM	2171	OE1	GLU	225	26.803	11.226	-7.594	1.00	38.07
	ATOM	2172	OE2	GLU	225	28.656	10.618	-6.678	1.00	48.45
35	ATOM	2173	C	GLU	225	23.490	9.114	-3.902	1.00	14.73
	ATOM	2174	O	GLU	225	22.657	10.016	-4.033	1.00	13.50
	ATOM	2175	N	GLY	226	23.089	7.859	-3.659	1.00	10.41
	ATOM	2176	H	GLY	226	23.732	7.202	-3.336	1.00	0.00
	ATOM	2177	CA	GLY	226	21.697	7.463	-3.776	1.00	7.22

	ATOM	2178	C	GLY	226	20.986	7.289	-2.455	1.00	8.63
	ATOM	2179	O	GLY	226	21.524	7.576	-1.378	1.00	14.32
	ATOM	2180	N	THR	227	19.735	6.849	-2.535	1.00	10.35
	ATOM	2181	H	THR	227	19.304	6.740	-3.409	1.00	0.00
5	ATOM	2182	CA	THR	227	18.909	6.566	-1.373	1.00	7.32
	ATOM	2183	CB	THR	227	17.544	6.211	-1.937	1.00	3.12
	ATOM	2184	OG1	THR	227	17.248	7.345	-2.725	1.00	12.83
	ATOM	2185	HG1	THR	227	16.969	8.067	-2.140	1.00	0.00
	ATOM	2186	CG2	THR	227	16.382	6.076	-0.988	1.00	2.69
10	ATOM	2187	C	THR	227	19.563	5.440	-0.562	1.00	8.27
	ATOM	2188	O	THR	227	20.207	4.542	-1.117	1.00	8.17
	ATOM	2189	N	LYS	228	19.465	5.533	0.758	1.00	9.07
	ATOM	2190	H	LYS	228	18.953	6.274	1.161	1.00	0.00
	ATOM	2191	CA	LYS	228	20.027	4.523	1.630	1.00	10.14
15	ATOM	2192	CB	LYS	228	20.479	5.067	2.971	1.00	15.14
	ATOM	2193	CG	LYS	228	21.337	6.290	3.029	1.00	19.45
	ATOM	2194	CD	LYS	228	22.464	6.201	2.058	1.00	21.10
	ATOM	2195	CE	LYS	228	23.498	7.216	2.476	1.00	29.17
	ATOM	2196	NZ	LYS	228	24.485	6.542	3.294	1.00	35.96
20	ATOM	2197	HZ1	LYS	228	25.167	7.233	3.663	1.00	0.00
	ATOM	2198	HZ2	LYS	228	24.987	5.841	2.712	1.00	0.00
	ATOM	2199	HZ3	LYS	228	24.014	6.058	4.086	1.00	0.00
	ATOM	2200	C	LYS	228	18.945	3.509	1.947	1.00	8.99
	ATOM	2201	O	LYS	228	17.772	3.879	2.070	1.00	2.97
25	ATOM	2202	N	PHE	229	19.335	2.239	2.074	1.00	7.55
	ATOM	2203	H	PHE	229	20.283	2.022	1.957	1.00	0.00
	ATOM	2204	CA	PHE	229	18.434	1.143	2.403	1.00	7.13
	ATOM	2205	CB	PHE	229	18.161	0.236	1.202	1.00	7.86
	ATOM	2206	CG	PHE	229	17.602	1.035	0.047	1.00	2.00
30	ATOM	2207	CD1	PHE	229	18.451	1.524	-0.944	1.00	8.70
	ATOM	2208	CD2	PHE	229	16.255	1.330	0.001	1.00	4.73
	ATOM	2209	CE1	PHE	229	17.948	2.314	-1.976	1.00	4.18
	ATOM	2210	CE2	PHE	229	15.758	2.122	-1.033	1.00	4.26
	ATOM	2211	CZ	PHE	229	16.599	2.612	-2.016	1.00	2.00
35	ATOM	2212	C	PHE	229	19.133	0.306	3.455	1.00	9.26
	ATOM	2213	O	PHE	229	20.356	0.321	3.597	1.00	8.05
	ATOM	2214	N	ASP	230	18.393	-0.461	4.215	1.00	9.93
	ATOM	2215	H	ASP	230	17.419	-0.468	4.097	1.00	0.00
	ATOM	2216	CA	ASP	230	19.041	-1.318	5.183	1.00	11.63

	ATOM	2217	CB	ASP	230	18.125	-1.490	6.382	1.00	7.41
	ATOM	2218	CG	ASP	230	18.175	-0.350	7.397	1.00	10.95
	ATOM	2219	OD1	ASP	230	19.033	0.524	7.281	1.00	10.94
	ATOM	2220	OD2	ASP	230	17.358	-0.353	8.326	1.00	12.05
5	ATOM	2221	C	ASP	230	19.424	-2.679	4.643	1.00	12.18
	ATOM	2222	O	ASP	230	20.264	-3.360	5.220	1.00	15.45
	ATOM	2223	N	THR	231	18.797	-3.145	3.565	1.00	14.62
	ATOM	2224	H	THR	231	18.165	-2.584	3.072	1.00	0.00
	ATOM	2225	CA	THR	231	19.108	-4.445	3.000	1.00	11.96
10	ATOM	2226	CB	THR	231	17.962	-5.429	3.266	1.00	6.38
	ATOM	2227	OG1	THR	231	16.791	-4.882	2.696	1.00	8.91
	ATOM	2228	HG1	THR	231	16.387	-4.307	3.370	1.00	0.00
	ATOM	2229	CG2	THR	231	17.723	-5.654	4.750	1.00	8.69
	ATOM	2230	C	THR	231	19.293	-4.277	1.508	1.00	9.43
15	ATOM	2231	O	THR	231	18.720	-3.348	0.929	1.00	10.77
	ATOM	2232	N	LEU	232	20.040	-5.146	0.840	1.00	6.23
	ATOM	2233	H	LEU	232	20.535	-5.828	1.341	1.00	0.00
	ATOM	2234	CA	LEU	232	20.134	-5.089	-0.598	1.00	2.95
	ATOM	2235	CB	LEU	232	21.146	-6.078	-1.084	1.00	2.00
20	ATOM	2236	CG	LEU	232	22.538	-5.695	-1.570	1.00	7.83
	ATOM	2237	CD1	LEU	232	22.670	-4.204	-1.804	1.00	6.14
	ATOM	2238	CD2	LEU	232	23.519	-6.259	-0.588	1.00	5.92
	ATOM	2239	C	LEU	232	18.788	-5.422	-1.210	1.00	3.62
	ATOM	2240	O	LEU	232	18.446	-4.879	-2.256	1.00	11.85
25	ATOM	2241	N	TRP	233	17.959	-6.266	-0.590	1.00	7.60
	ATOM	2242	H	TRP	233	18.236	-6.662	0.263	1.00	0.00
	ATOM	2243	CA	TRP	233	16.650	-6.611	-1.119	1.00	3.89
	ATOM	2244	CB	TRP	233	15.903	-7.634	-0.232	1.00	5.05
	ATOM	2245	CG	TRP	233	14.559	-8.122	-0.793	1.00	3.68
30	ATOM	2246	CD2	TRP	233	13.319	-7.504	-0.707	1.00	7.30
	ATOM	2247	CE2	TRP	233	12.516	-8.393	-1.406	1.00	2.00
	ATOM	2248	CE3	TRP	233	12.743	-6.346	-0.161	1.00	5.75
	ATOM	2249	CD1	TRP	233	14.503	-9.298	-1.485	1.00	2.00
	ATOM	2250	NE1	TRP	233	13.249	-9.419	-1.834	1.00	2.00
35	ATOM	2251	HE1	TRP	233	12.886	-10.159	-2.387	1.00	0.00
	ATOM	2252	CZ2	TRP	233	11.156	-8.154	-1.566	1.00	5.63
	ATOM	2253	CZ3	TRP	233	11.386	-6.098	-0.314	1.00	2.00
	ATOM	2254	CH2	TRP	233	10.597	-7.001	-1.012	1.00	11.94
	ATOM	2255	C	TRP	233	15.776	-5.389	-1.218	1.00	8.61

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	ATOM	2256	O	TRP	233	15.050	-5.243	-2.208	1.00	5.31
	ATOM	2257	N	GLN	234	15.757	-4.569	-0.160	1.00	7.54
	ATOM	2258	H	GLN	234	16.278	-4.789	0.645	1.00	0.00
	ATOM	2259	CA	GLN	234	14.936	-3.379	-0.181	1.00	5.71
5	ATOM	2260	CB	GLN	234	14.898	-2.731	1.182	1.00	8.39
	ATOM	2261	CG	GLN	234	13.956	-3.432	2.121	1.00	10.31
	ATOM	2262	CD	GLN	234	14.065	-2.931	3.557	1.00	11.00
	ATOM	2263	OE1	GLN	234	15.131	-3.022	4.161	1.00	6.43
	ATOM	2264	NE2	GLN	234	13.010	-2.409	4.171	1.00	6.16
10	ATOM	2265	HE21	GLN	234	12.163	-2.384	3.672	1.00	0.00
	ATOM	2266	HE22	GLN	234	13.119	-2.107	5.091	1.00	0.00
	ATOM	2267	C	GLN	234	15.479	-2.388	-1.194	1.00	3.99
	ATOM	2268	O	GLN	234	14.693	-1.634	-1.757	1.00	8.14
	ATOM	2269	N	LEU	235	16.775	-2.345	-1.489	1.00	5.43
15	ATOM	2270	H	LEU	235	17.407	-2.893	-0.976	1.00	0.00
	ATOM	2271	CA	LEU	235	17.285	-1.460	-2.527	1.00	8.35
	ATOM	2272	CB	LEU	235	18.831	-1.563	-2.577	1.00	2.00
	ATOM	2273	CG	LEU	235	19.649	-0.729	-3.596	1.00	2.00
	ATOM	2274	CD1	LEU	235	20.947	-0.300	-2.980	1.00	2.00
20	ATOM	2275	CD2	LEU	235	20.012	-1.545	-4.817	1.00	4.96
	ATOM	2276	C	LEU	235	16.659	-1.826	-3.873	1.00	12.15
	ATOM	2277	O	LEU	235	16.060	-0.967	-4.545	1.00	13.16
	ATOM	2278	N	VAL	236	16.710	-3.120	-4.220	1.00	9.84
	ATOM	2279	H	VAL	236	17.132	-3.757	-3.603	1.00	0.00
25	ATOM	2280	CA	VAL	236	16.185	-3.580	-5.494	1.00	9.17
	ATOM	2281	CB	VAL	236	16.477	-5.079	-5.682	1.00	8.00
	ATOM	2282	CG1	VAL	236	15.742	-5.655	-6.880	1.00	9.58
	ATOM	2283	CG2	VAL	236	17.968	-5.216	-5.949	1.00	3.72
	ATOM	2284	C	VAL	236	14.707	-3.320	-5.616	1.00	9.31
30	ATOM	2285	O	VAL	236	14.278	-2.681	-6.586	1.00	17.05
	ATOM	2286	N	GLU	237	13.942	-3.715	-4.602	1.00	7.98
	ATOM	2287	H	GLU	237	14.359	-4.221	-3.874	1.00	0.00
	ATOM	2288	CA	GLU	237	12.507	-3.526	-4.598	1.00	5.37
	ATOM	2289	CB	GLU	237	11.923	-4.003	-3.284	1.00	4.42
35	ATOM	2290	CG	GLU	237	10.399	-4.242	-3.284	1.00	9.65
	ATOM	2291	CD	GLU	237	9.844	-5.417	-4.113	1.00	13.56
	ATOM	2292	OE1	GLU	237	8.630	-5.457	-4.307	1.00	22.81
	ATOM	2293	OE2	GLU	237	10.589	-6.290	-4.562	1.00	14.84
	ATOM	2294	C	GLU	237	12.079	-2.091	-4.814	1.00	8.52

	ATOM	2295	O	GLU	237	11.084	-1.831	-5.485	1.00	11.94
	ATOM	2296	N	TYR	238	12.844	-1.118	-4.334	1.00	9.87
	ATOM	2297	H	TYR	238	13.719	-1.342	-3.953	1.00	0.00
	ATOM	2298	CA	TYR	238	12.449	0.269	-4.405	1.00	8.12
5	ATOM	2299	CB	TYR	238	13.315	1.018	-3.400	1.00	12.67
	ATOM	2300	CG	TYR	238	12.969	2.471	-3.148	1.00	12.96
	ATOM	2301	CD1	TYR	238	12.065	2.796	-2.126	1.00	6.34
	ATOM	2302	CE1	TYR	238	11.766	4.141	-1.884	1.00	8.90
	ATOM	2303	CD2	TYR	238	13.576	3.482	-3.925	1.00	12.47
10	ATOM	2304	CE2	TYR	238	13.277	4.823	-3.672	1.00	7.42
	ATOM	2305	CZ	TYR	238	12.380	5.142	-2.656	1.00	8.04
	ATOM	2306	OH	TYR	238	12.118	6.469	-2.398	1.00	10.73
	ATOM	2307	HH	TYR	238	11.600	6.534	-1.589	1.00	0.00
	ATOM	2308	C	TYR	238	12.658	0.760	-5.827	1.00	10.55
15	ATOM	2309	O	TYR	238	11.825	1.506	-6.348	1.00	9.33
	ATOM	2310	N	LEU	239	13.764	0.323	-6.443	1.00	12.05
	ATOM	2311	H	LEU	239	14.358	-0.294	-5.962	1.00	0.00
	ATOM	2312	CA	LEU	239	14.169	0.725	-7.784	1.00	10.14
	ATOM	2313	CB	LEU	239	15.631	0.379	-8.015	1.00	11.39
20	ATOM	2314	CG	LEU	239	16.612	1.015	-7.051	1.00	9.45
	ATOM	2315	CD1	LEU	239	18.003	0.616	-7.428	1.00	4.78
	ATOM	2316	CD2	LEU	239	16.458	2.515	-7.075	1.00	11.26
	ATOM	2317	C	LEU	239	13.357	0.078	-8.873	1.00	9.57
	ATOM	2318	O	LEU	239	13.533	0.339	-10.054	1.00	9.15
25	ATOM	2319	N	LYS	240	12.525	-0.867	-8.476	1.00	15.55
	ATOM	2320	H	LYS	240	12.628	-1.226	-7.572	1.00	0.00
	ATOM	2321	CA	LYS	240	11.598	-1.526	-9.359	1.00	17.48
	ATOM	2322	CB	LYS	240	11.086	-2.846	-8.804	1.00	17.46
	ATOM	2323	CG	LYS	240	12.080	-3.968	-8.744	1.00	15.22
30	ATOM	2324	CD	LYS	240	11.241	-5.061	-8.143	1.00	14.34
	ATOM	2325	CE	LYS	240	12.104	-6.285	-7.941	1.00	18.77
	ATOM	2326	NZ	LYS	240	11.320	-7.303	-7.288	1.00	14.93
	ATOM	2327	HZ1	LYS	240	10.510	-7.562	-7.887	1.00	0.00
	ATOM	2328	HZ2	LYS	240	10.971	-6.935	-6.381	1.00	0.00
35	ATOM	2329	HZ3	LYS	240	11.912	-8.142	-7.119	1.00	0.00
	ATOM	2330	C	LYS	240	10.393	-0.647	-9.532	1.00	21.00
	ATOM	2331	O	LYS	240	9.710	-0.714	-10.561	1.00	24.63
	ATOM	2332	N	LEU	241	10.121	0.155	-8.496	1.00	22.22
	ATOM	2333	H	LEU	241	10.722	0.171	-7.725	1.00	0.00

	ATOM	2334	CA	LEU	241	8.936	0.992	-8.503	1.00	21.50
	ATOM	2335	CB	LEU	241	8.312	0.984	-7.111	1.00	22.84
	ATOM	2336	CG	LEU	241	8.099	-0.392	-6.506	1.00	25.03
	ATOM	2337	CD1	LEU	241	7.695	-0.270	-5.047	1.00	28.03
5	ATOM	2338	CD2	LEU	241	7.086	-1.136	-7.365	1.00	27.90
	ATOM	2339	C	LEU	241	9.240	2.402	-8.922	1.00	20.05
	ATOM	2340	O	LEU	241	8.443	2.970	-9.660	1.00	27.60
	ATOM	2341	N	LYS	242	10.365	2.968	-8.472	1.00	18.36
	ATOM	2342	H	LYS	242	11.030	2.419	-8.002	1.00	0.00
10	ATOM	2343	CA	LYS	242	10.736	4.355	-8.708	1.00	18.26
	ATOM	2344	CB	LYS	242	10.562	5.193	-7.429	1.00	19.41
	ATOM	2345	CG	LYS	242	9.096	5.447	-7.114	1.00	17.62
	ATOM	2346	CD	LYS	242	8.908	6.480	-6.033	1.00	14.02
	ATOM	2347	CE	LYS	242	9.326	5.989	-4.671	1.00	10.78
15	ATOM	2348	NZ	LYS	242	8.973	6.952	-3.638	1.00	12.29
	ATOM	2349	HZ1	LYS	242	7.964	7.198	-3.716	1.00	0.00
	ATOM	2350	HZ2	LYS	242	9.549	7.808	-3.757	1.00	0.00
	ATOM	2351	HZ3	LYS	242	9.156	6.528	-2.709	1.00	0.00
	ATOM	2352	C	LYS	242	12.192	4.371	-9.123	1.00	18.38
20	ATOM	2353	O	LYS	242	13.044	3.948	-8.340	1.00	23.83
	ATOM	2354	N	ALA	243	12.492	4.869	-10.327	1.00	18.80
	ATOM	2355	H	ALA	243	11.770	5.267	-10.850	1.00	0.00
	ATOM	2356	CA	ALA	243	13.841	4.812	-10.887	1.00	19.06
	ATOM	2357	CB	ALA	243	13.949	5.553	-12.237	1.00	15.73
25	ATOM	2358	C	ALA	243	14.883	5.412	-9.975	1.00	16.76
	ATOM	2359	O	ALA	243	16.030	4.971	-10.012	1.00	16.14
	ATOM	2360	N	ASP	244	14.528	6.456	-9.214	1.00	13.41
	ATOM	2361	H	ASP	244	13.631	6.846	-9.318	1.00	0.00
	ATOM	2362	CA	ASP	244	15.399	7.026	-8.202	1.00	14.59
30	ATOM	2363	CB	ASP	244	15.314	6.027	-7.034	1.00	18.56
	ATOM	2364	CG	ASP	244	15.807	6.513	-5.697	1.00	15.45
	ATOM	2365	OD1	ASP	244	15.432	7.607	-5.302	1.00	14.61
	ATOM	2366	OD2	ASP	244	16.551	5.779	-5.058	1.00	15.49
	ATOM	2367	C	ASP	244	16.834	7.347	-8.637	1.00	14.32
35	ATOM	2368	O	ASP	244	17.841	7.119	-7.947	1.00	17.05
	ATOM	2369	N	GLY	245	16.948	7.902	-9.840	1.00	17.98
	ATOM	2370	H	GLY	245	16.134	8.056	-10.361	1.00	0.00
	ATOM	2371	CA	GLY	245	18.239	8.279	-10.368	1.00	10.81
	ATOM	2372	C	GLY	245	18.811	7.304	-11.369	1.00	11.69

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	ATOM	2373	O	GLY	245	19.760	7.670	-12.059	1.00	14.24
	ATOM	2374	N	LEU	246	18.279	6.091	-11.484	1.00	15.09
	ATOM	2375	H	LEU	246	17.538	5.845	-10.890	1.00	0.00
	ATOM	2376	CA	LEU	246	18.736	5.089	-12.451	1.00	16.67
5	ATOM	2377	CB	LEU	246	18.123	3.729	-12.247	1.00	12.64
	ATOM	2378	CG	LEU	246	18.387	2.880	-11.055	1.00	12.13
	ATOM	2379	CD1	LEU	246	17.581	1.601	-11.239	1.00	16.26
	ATOM	2380	CD2	LEU	246	19.866	2.604	-10.896	1.00	7.94
	ATOM	2381	C	LEU	246	18.322	5.465	-13.861	1.00	17.17
10	ATOM	2382	O	LEU	246	17.378	6.237	-14.033	1.00	16.84
	ATOM	2383	N	ILE	247	19.004	4.899	-14.859	1.00	18.24
	ATOM	2384	H	ILE	247	19.848	4.448	-14.647	1.00	0.00
	ATOM	2385	CA	ILE	247	18.640	5.084	-16.243	1.00	19.23
	ATOM	2386	CB	ILE	247	19.743	4.443	-17.166	1.00	21.02
15	ATOM	2387	CG2	ILE	247	19.762	2.933	-17.037	1.00	18.75
	ATOM	2388	CG1	ILE	247	19.461	4.744	-18.623	1.00	18.10
	ATOM	2389	CD	ILE	247	19.246	6.228	-18.940	1.00	26.97
	ATOM	2390	C	ILE	247	17.267	4.479	-16.501	1.00	24.15
	ATOM	2391	O	ILE	247	16.548	4.963	-17.381	1.00	27.80
20	ATOM	2392	N	TYR	248	16.839	3.453	-15.764	1.00	22.21
	ATOM	2393	H	TYR	248	17.362	3.113	-15.008	1.00	0.00
	ATOM	2394	CA	TYR	248	15.562	2.810	-16.014	1.00	21.62
	ATOM	2395	CB	TYR	248	15.690	1.863	-17.222	1.00	21.58
	ATOM	2396	CG	TYR	248	14.358	1.459	-17.836	1.00	22.46
25	ATOM	2397	CD1	TYR	248	13.932	0.136	-17.768	1.00	25.31
	ATOM	2398	CE1	TYR	248	12.710	-0.232	-18.321	1.00	25.82
	ATOM	2399	CD2	TYR	248	13.564	2.420	-18.464	1.00	24.69
	ATOM	2400	CE2	TYR	248	12.343	2.057	-19.030	1.00	20.76
	ATOM	2401	CZ	TYR	248	11.926	0.733	-18.952	1.00	22.54
30	ATOM	2402	OH	TYR	248	10.723	0.368	-19.518	1.00	26.05
	ATOM	2403	HH	TYR	248	10.182	1.145	-19.684	1.00	0.00
	ATOM	2404	C	TYR	248	15.197	2.013	-14.771	1.00	20.39
	ATOM	2405	O	TYR	248	16.116	1.543	-14.091	1.00	21.20
	ATOM	2406	N	CYS	249	13.897	1.885	-14.469	1.00	16.84
35	ATOM	2407	H	CYS	249	13.238	2.385	-14.998	1.00	0.00
	ATOM	2408	CA	CYS	249	13.422	1.032	-13.382	1.00	15.26
	ATOM	2409	CB	CYS	249	11.901	1.106	-13.174	1.00	14.09
	ATOM	2410	SG	CYS	249	11.404	2.626	-12.300	1.00	18.14
	ATOM	2411	C	CYS	249	13.753	-0.412	-13.666	1.00	14.21

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	ATOM	2412	O	CYS	249	13.773	-0.843	-14.823	1.00	14.52
	ATOM	2413	N	LEU	250	14.025	-1.151	-12.589	1.00	13.28
	ATOM	2414	H	LEU	250	13.948	-0.736	-11.703	1.00	0.00
	ATOM	2415	CA	LEU	250	14.352	-2.561	-12.686	1.00	15.78
5	ATOM	2416	CB	LEU	250	14.919	-3.094	-11.360	1.00	6.33
	ATOM	2417	CG	LEU	250	16.117	-2.358	-10.789	1.00	6.54
	ATOM	2418	CD1	LEU	250	16.561	-3.102	-9.557	1.00	5.37
	ATOM	2419	CD2	LEU	250	17.241	-2.245	-11.807	1.00	8.52
	ATOM	2420	C	LEU	250	13.064	-3.292	-13.029	1.00	18.36
10	ATOM	2421	O	LEU	250	11.987	-2.905	-12.563	1.00	20.40
	ATOM	2422	N	LYS	251	13.147	-4.314	-13.870	1.00	21.41
	ATOM	2423	H	LYS	251	14.026	-4.664	-14.120	1.00	0.00
	ATOM	2424	CA	LYS	251	11.974	-5.035	-14.309	1.00	29.19
	ATOM	2425	CB	LYS	251	11.594	-4.599	-15.727	1.00	31.81
15	ATOM	2426	CG	LYS	251	10.932	-3.252	-15.911	1.00	36.36
	ATOM	2427	CD	LYS	251	10.358	-3.321	-17.316	1.00	46.04
	ATOM	2428	CE	LYS	251	9.335	-2.219	-17.552	1.00	49.77
	ATOM	2429	NZ	LYS	251	8.508	-2.570	-18.689	1.00	47.05
	ATOM	2430	HZ1	LYS	251	8.015	-3.461	-18.478	1.00	0.00
20	ATOM	2431	HZ2	LYS	251	9.095	-2.696	-19.538	1.00	0.00
	ATOM	2432	HZ3	LYS	251	7.805	-1.824	-18.854	1.00	0.00
	ATOM	2433	C	LYS	251	12.281	-6.529	-14.273	1.00	31.19
	ATOM	2434	O	LYS	251	12.298	-7.107	-13.187	1.00	32.83
	ATOM	2435	N	GLU	252	12.577	-7.221	-15.372	1.00	29.48
25	ATOM	2436	H	GLU	252	12.735	-6.759	-16.224	1.00	0.00
	ATOM	2437	CA	GLU	252	12.808	-8.649	-15.349	1.00	27.78
	ATOM	2438	CB	GLU	252	12.753	-9.113	-16.799	1.00	33.80
	ATOM	2439	CG	GLU	252	12.915	-10.598	-17.097	1.00	42.74
	ATOM	2440	CD	GLU	252	13.832	-10.890	-18.277	1.00	44.39
30	ATOM	2441	OE1	GLU	252	13.632	-10.336	-19.360	1.00	48.44
	ATOM	2442	OE2	GLU	252	14.760	-11.678	-18.098	1.00	45.82
	ATOM	2443	C	GLU	252	14.140	-9.005	-14.690	1.00	24.46
	ATOM	2444	O	GLU	252	15.182	-8.416	-14.990	1.00	23.91
	ATOM	2445	N	ALA	253	14.133	-9.980	-13.786	1.00	22.26
35	ATOM	2446	H	ALA	253	13.277	-10.377	-13.540	1.00	0.00
	ATOM	2447	CA	ALA	253	15.354	-10.499	-13.186	1.00	23.18
	ATOM	2448	CB	ALA	253	15.051	-11.274	-11.919	1.00	20.69
	ATOM	2449	C	ALA	253	16.032	-11.469	-14.153	1.00	25.29
	ATOM	2450	O	ALA	253	15.406	-12.393	-14.672	1.00	25.19

	ATOM	2451	N	CYS	254	17.302	-11.290	-14.458	1.00	28.10
	ATOM	2452	H	CYS	254	17.789	-10.541	-14.055	1.00	0.00
	ATOM	2453	CA	CYS	254	18.009	-12.221	-15.306	1.00	32.61
	ATOM	2454	CB	CYS	254	19.237	-11.516	-15.870	1.00	31.75
5	ATOM	2455	SG	CYS	254	20.443	-12.611	-16.651	1.00	32.44
	ATOM	2456	C	CYS	254	18.385	-13.402	-14.414	1.00	36.58
	ATOM	2457	O	CYS	254	19.302	-13.243	-13.604	1.00	32.66
	ATOM	2458	N	PRO	255	17.736	-14.582	-14.469	1.00	42.06
	ATOM	2459	CD	PRO	255	16.816	-15.010	-15.511	1.00	44.90
10	ATOM	2460	CA	PRO	255	17.881	-15.667	-13.508	1.00	46.64
	ATOM	2461	CB	PRO	255	16.693	-16.572	-13.752	1.00	45.44
	ATOM	2462	CG	PRO	255	15.803	-15.772	-14.666	1.00	45.18
	ATOM	2463	C	PRO	255	19.209	-16.379	-13.699	1.00	52.71
	ATOM	2464	O	PRO	255	19.967	-16.514	-12.736	1.00	51.83
15	ATOM	2465	N	ASN	256	19.423	-16.849	-14.938	1.00	57.99
	ATOM	2466	H	ASN	256	18.668	-16.918	-15.559	1.00	0.00
	ATOM	2467	CA	ASN	256	20.623	-17.469	-15.488	1.00	62.54
	ATOM	2468	CB	ASN	256	21.441	-18.299	-14.490	1.00	65.25
	ATOM	2469	CG	ASN	256	22.929	-18.083	-14.712	1.00	66.81
20	ATOM	2470	OD1	ASN	256	23.634	-17.431	-13.921	1.00	67.18
	ATOM	2471	ND2	ASN	256	23.440	-18.585	-15.825	1.00	67.62
	ATOM	2472	HD21	ASN	256	22.782	-18.992	-16.444	1.00	0.00
	ATOM	2473	HD22	ASN	256	24.395	-18.528	-15.990	1.00	0.00
	ATOM	2474	C	ASN	256	20.177	-18.438	-16.589	1.00	64.50
25	ATOM	2475	O	ASN	256	20.971	-18.719	-17.481	1.00	67.70
	ATOM	2476	OT	ASN	256	19.021	-18.861	-16.603	1.00	65.26
	ATOM	2477	CB	ASN	301	36.860	-2.320	-19.345	1.00	69.57
	ATOM	2478	CG	ASN	301	36.797	-2.379	-20.870	1.00	73.37
	ATOM	2479	OD1	ASN	301	35.914	-1.729	-21.445	1.00	74.19
30	ATOM	2480	ND2	ASN	301	37.648	-3.095	-21.595	1.00	71.92
	ATOM	2481	HD21	ASN	301	38.347	-3.615	-21.146	1.00	0.00
	ATOM	2482	HD22	ASN	301	37.539	-3.068	-22.570	1.00	0.00
	ATOM	2483	C	ASN	301	35.546	-1.915	-17.229	1.00	62.96
	ATOM	2484	O	ASN	301	35.538	-2.834	-16.427	1.00	64.29
35	ATOM	2485	HT1	ASN	301	35.437	-0.113	-19.057	1.00	0.00
	ATOM	2486	HT2	ASN	301	33.944	-0.750	-18.698	1.00	0.00
	ATOM	2487	N	ASN	301	34.823	-0.927	-19.230	1.00	62.99
	ATOM	2488	HT3	ASN	301	34.663	-1.030	-20.256	1.00	0.00
	ATOM	2489	CA	ASN	301	35.463	-2.137	-18.724	1.00	65.07

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	ATOM	2490	N	GLN	302	35.788	-0.672	-16.851	1.00	60.20
	ATOM	2491	H	GLN	302	36.395	-0.113	-17.375	1.00	0.00
	ATOM	2492	CA	GLN	302	35.444	-0.176	-15.522	1.00	56.74
	ATOM	2493	CB	GLN	302	36.677	0.491	-14.883	1.00	57.90
5	ATOM	2494	CG	GLN	302	37.907	-0.432	-14.691	1.00	63.47
	ATOM	2495	CD	GLN	302	38.599	-1.034	-15.937	1.00	65.28
	ATOM	2496	OE1	GLN	302	38.352	-0.683	-17.103	1.00	66.79
	ATOM	2497	NE2	GLN	302	39.485	-2.004	-15.770	1.00	65.62
	ATOM	2498	HE21	GLN	302	39.677	-2.304	-14.860	1.00	0.00
10	ATOM	2499	HE22	GLN	302	39.918	-2.371	-16.565	1.00	0.00
	ATOM	2500	C	GLN	302	34.360	0.845	-15.961	1.00	52.62
	ATOM	2501	O	GLN	302	33.831	0.670	-17.088	1.00	54.45
	ATOM	2502	N	LEU	303	34.058	1.917	-15.204	1.00	44.49
	ATOM	2503	H	LEU	303	34.536	2.006	-14.354	1.00	0.00
15	ATOM	2504	CA	LEU	303	33.028	2.927	-15.484	1.00	34.84
	ATOM	2505	CB	LEU	303	32.932	3.417	-16.940	1.00	31.82
	ATOM	2506	CG	LEU	303	33.369	4.825	-17.292	1.00	30.98
	ATOM	2507	CD1	LEU	303	34.886	4.916	-17.295	1.00	31.39
	ATOM	2508	CD2	LEU	303	32.860	5.183	-18.676	1.00	32.60
20	ATOM	2509	C	LEU	303	31.624	2.471	-15.160	1.00	31.46
	ATOM	2510	O	LEU	303	30.919	1.703	-15.820	1.00	30.32
	ATOM	2511	N	PTY	304	31.253	2.987	-14.015	1.00	29.09
	ATOM	2512	H	PTY	304	31.821	3.642	-13.563	1.00	0.00
	ATOM	2513	CA	PTY	304	29.936	2.775	-13.481	1.00	25.08
25	ATOM	2514	CB	PTY	304	30.043	2.545	-11.983	1.00	22.52
	ATOM	2515	CG	PTY	304	30.722	1.239	-11.678	1.00	20.76
	ATOM	2516	CD1	PTY	304	29.995	0.026	-11.631	1.00	19.61
	ATOM	2517	CE1	PTY	304	30.618	-1.204	-11.387	1.00	18.55
	ATOM	2518	CD2	PTY	304	32.114	1.170	-11.468	1.00	23.88
30	ATOM	2519	CE2	PTY	304	32.746	-0.058	-11.223	1.00	28.36
	ATOM	2520	CZ	PTY	304	32.004	-1.261	-11.185	1.00	23.76
	ATOM	2521	OH	PTY	304	32.693	-2.423	-10.923	1.00	28.36
	ATOM	2522	OR1	PTY	304	32.971	-4.897	-11.058	1.00	28.97
	ATOM	2523	OR2	PTY	304	34.118	-3.534	-12.638	1.00	33.20
35	ATOM	2524	OR3	PTY	304	31.717	-3.857	-12.879	1.00	30.35
	ATOM	2525	PR	PTY	304	32.822	-3.701	-11.913	1.00	29.14
	ATOM	2526	C	PTY	304	29.189	4.049	-13.805	1.00	24.98
	ATOM	2527	O	PTY	304	29.765	5.121	-14.023	1.00	32.82
	ATOM	2528	N	ASN	305	27.890	3.929	-13.870	1.00	23.83

	ATOM	2529	H	ASN	305	27.489	3.081	-13.594	1.00	0.00
	ATOM	2530	CA	ASN	305	27.030	5.042	-14.190	1.00	24.41
	ATOM	2531	CB	ASN	305	25.758	4.572	-14.824	1.00	26.42
	ATOM	2532	CG	ASN	305	25.898	3.944	-16.184	1.00	24.24
5	ATOM	2533	OD1	ASN	305	25.035	4.171	-17.007	1.00	33.32
	ATOM	2534	ND2	ASN	305	26.883	3.141	-16.534	1.00	27.31
	ATOM	2535	HD21	ASN	305	27.568	2.878	-15.888	1.00	0.00
	ATOM	2536	HD22	ASN	305	26.910	2.846	-17.468	1.00	0.00
	ATOM	2537	C	ASN	305	26.646	5.788	-12.931	1.00	26.89
10	ATOM	2538	O	ASN	305	26.463	5.181	-11.870	1.00	26.21
	ATOM	2539	N	GLU	306	26.502	7.098	-13.029	1.00	26.87
	ATOM	2540	H	GLU	306	26.619	7.529	-13.901	1.00	0.00
	ATOM	2541	CA	GLU	306	26.052	7.888	-11.905	1.00	29.02
	ATOM	2542	CB	GLU	306	26.708	9.275	-11.886	1.00	32.98
15	ATOM	2543	CG	GLU	306	26.552	10.101	-13.156	1.00	35.35
	ATOM	2544	CD	GLU	306	26.731	11.581	-12.905	1.00	36.20
	ATOM	2545	OE1	GLU	306	25.760	12.318	-13.089	1.00	39.79
	ATOM	2546	OE2	GLU	306	27.833	11.985	-12.528	1.00	39.08
	ATOM	2547	C	GLU	306	24.554	8.067	-12.017	1.00	26.18
20	ATOM	2548	O	GLU	306	23.999	7.923	-13.109	1.00	26.43
	ATOM	2549	N	LEU	307	23.926	8.432	-10.904	1.00	26.19
	ATOM	2550	H	LEU	307	24.434	8.578	-10.080	1.00	0.00
	ATOM	2551	CA	LEU	307	22.512	8.679	-10.915	1.00	26.40
	ATOM	2552	CB	LEU	307	21.819	8.244	-9.639	1.00	28.26
25	ATOM	2553	CG	LEU	307	22.362	8.248	-8.253	1.00	30.34
	ATOM	2554	CD1	LEU	307	21.230	8.042	-7.267	1.00	31.01
	ATOM	2555	CD2	LEU	307	23.357	7.136	-8.115	1.00	28.88
	ATOM	2556	C	LEU	307	22.119	10.118	-11.130	1.00	25.17
	ATOM	2557	O	LEU	307	22.824	11.077	-10.810	1.00	25.91
30	ATOM	2558	N	ASN	308	20.929	10.231	-11.692	1.00	23.16
	ATOM	2559	H	ASN	308	20.474	9.395	-11.916	1.00	0.00
	ATOM	2560	CA	ASN	308	20.285	11.497	-11.977	1.00	22.52
	ATOM	2561	CB	ASN	308	19.149	11.318	-12.993	1.00	22.41
	ATOM	2562	CG	ASN	308	19.569	10.764	-14.349	1.00	17.49
35	ATOM	2563	OD1	ASN	308	20.482	11.269	-15.006	1.00	18.25
	ATOM	2564	ND2	ASN	308	18.899	9.712	-14.812	1.00	12.44
	ATOM	2565	HD21	ASN	308	18.211	9.290	-14.262	1.00	0.00
	ATOM	2566	HD22	ASN	308	19.116	9.403	-15.722	1.00	0.00
	ATOM	2567	C	ASN	308	19.714	11.910	-10.638	1.00	23.34

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	ATOM	2568	O	ASN	308	18.580	11.582	-10.279	1.00	19.95
	ATOM	2569	N	LEU	309	20.511	12.640	-9.874	1.00	29.40
	ATOM	2570	H	LEU	309	21.402	12.862	-10.222	1.00	0.00
	ATOM	2571	CA	LEU	309	20.143	13.022	-8.516	1.00	31.98
5	ATOM	2572	CB	LEU	309	21.281	13.803	-7.886	1.00	31.78
	ATOM	2573	CG	LEU	309	22.549	13.034	-7.551	1.00	30.04
	ATOM	2574	CD1	LEU	309	23.498	13.976	-6.828	1.00	32.49
	ATOM	2575	CD2	LEU	309	22.233	11.839	-6.670	1.00	29.67
	ATOM	2576	C	LEU	309	18.857	13.811	-8.352	1.00	32.71
10	ATOM	2577	O	LEU	309	18.184	13.676	-7.327	1.00	33.18
	ATOM	2578	N	GLY	310	18.453	14.571	-9.376	1.00	29.51
	ATOM	2579	H	GLY	310	18.976	14.564	-10.197	1.00	0.00
	ATOM	2580	CA	GLY	310	17.179	15.284	-9.330	1.00	27.02
	ATOM	2581	C	GLY	310	15.983	14.351	-9.552	1.00	26.12
15	ATOM	2582	O	GLY	310	14.841	14.792	-9.660	1.00	24.61
	ATOM	2583	N	ARG	311	16.223	13.050	-9.692	1.00	26.37
	ATOM	2584	H	ARG	311	17.136	12.716	-9.635	1.00	0.00
	ATOM	2585	CA	ARG	311	15.167	12.087	-9.890	1.00	26.85
	ATOM	2586	CB	ARG	311	15.520	11.222	-11.115	1.00	28.37
20	ATOM	2587	CG	ARG	311	15.337	11.959	-12.441	1.00	22.17
	ATOM	2588	CD	ARG	311	13.858	12.286	-12.617	1.00	20.22
	ATOM	2589	NE	ARG	311	13.085	11.087	-12.889	1.00	22.46
	ATOM	2590	HE	ARG	311	13.270	10.598	-13.718	1.00	0.00
	ATOM	2591	CZ	ARG	311	12.120	10.608	-12.098	1.00	30.68
25	ATOM	2592	NH1	ARG	311	11.757	11.199	-10.944	1.00	37.34
	ATOM	2593	HH11	ARG	311	12.203	12.040	-10.636	1.00	0.00
	ATOM	2594	HH12	ARG	311	11.030	10.791	-10.389	1.00	0.00
	ATOM	2595	NH2	ARG	311	11.490	9.497	-12.482	1.00	24.13
	ATOM	2596	HH21	ARG	311	11.739	9.048	-13.337	1.00	0.00
30	ATOM	2597	HH22	ARG	311	10.779	9.100	-11.899	1.00	0.00
	ATOM	2598	C	ARG	311	14.970	11.229	-8.650	1.00	26.76
	ATOM	2599	O	ARG	311	14.321	10.178	-8.704	1.00	27.21
	ATOM	2600	N	ARG	312	15.562	11.638	-7.528	1.00	24.91
	ATOM	2601	H	ARG	312	16.027	12.501	-7.525	1.00	0.00
35	ATOM	2602	CA	ARG	312	15.398	10.960	-6.245	1.00	19.46
	ATOM	2603	CB	ARG	312	16.685	10.983	-5.444	1.00	18.55
	ATOM	2604	CG	ARG	312	17.790	10.119	-6.047	1.00	18.34
	ATOM	2605	CD	ARG	312	19.017	10.171	-5.167	1.00	16.42
	ATOM	2606	NE	ARG	312	18.651	10.046	-3.764	1.00	12.29

	ATOM	2607	HE	ARG	312	17.873	9.507	-3.514	1.00	0.00
	ATOM	2608	CZ	ARG	312	19.374	10.627	-2.804	1.00	18.47
	ATOM	2609	NH1	ARG	312	20.476	11.346	-3.081	1.00	12.42
	ATOM	2610	HH11	ARG	312	20.781	11.451	-4.026	1.00	0.00
5	ATOM	2611	HH12	ARG	312	20.990	11.774	-2.338	1.00	0.00
	ATOM	2612	NH2	ARG	312	18.965	10.470	-1.542	1.00	17.98
	ATOM	2613	HH21	ARG	312	18.143	9.932	-1.353	1.00	0.00
	ATOM	2614	HH22	ARG	312	19.483	10.878	-0.791	1.00	0.00
	ATOM	2615	C	ARG	312	14.335	11.688	-5.435	1.00	16.16
10	ATOM	2616	O	ARG	312	14.101	12.879	-5.676	1.00	12.19
	ATOM	2617	N	GLU	313	13.665	10.995	-4.505	1.00	13.42
	ATOM	2618	H	GLU	313	13.870	10.047	-4.350	1.00	0.00
	ATOM	2619	CA	GLU	313	12.720	11.659	-3.609	1.00	11.44
	ATOM	2620	CB	GLU	313	11.866	10.690	-2.822	1.00	8.28
15	ATOM	2621	CG	GLU	313	10.908	9.792	-3.562	1.00	12.05
	ATOM	2622	CD	GLU	313	9.671	10.432	-4.151	1.00	13.52
	ATOM	2623	OE1	GLU	313	9.666	11.623	-4.445	1.00	17.14
	ATOM	2624	OE2	GLU	313	8.694	9.715	-4.345	1.00	12.82
	ATOM	2625	C	GLU	313	13.465	12.489	-2.568	1.00	8.47
20	ATOM	2626	O	GLU	313	14.571	12.145	-2.119	1.00	10.79
	ATOM	2627	N	GLU	314	12.855	13.568	-2.125	1.00	11.58
	ATOM	2628	H	GLU	314	11.943	13.768	-2.434	1.00	0.00
	ATOM	2629	CA	GLU	314	13.460	14.406	-1.119	1.00	17.11
	ATOM	2630	CB	GLU	314	13.182	15.876	-1.474	1.00	27.79
25	ATOM	2631	CG	GLU	314	14.202	16.886	-0.930	1.00	39.55
	ATOM	2632	CD	GLU	314	13.586	18.089	-0.219	1.00	47.02
	ATOM	2633	OE1	GLU	314	13.940	18.333	0.940	1.00	45.02
	ATOM	2634	OE2	GLU	314	12.756	18.772	-0.825	1.00	50.75
	ATOM	2635	C	GLU	314	12.835	14.037	0.226	1.00	11.85
30	ATOM	2636	O	GLU	314	11.606	13.917	0.331	1.00	7.93
	ATOM	2637	N	PTY	315	13.660	13.816	1.254	1.00	12.01
	ATOM	2638	H	PTY	315	14.628	13.926	1.152	1.00	0.00
	ATOM	2639	CA	PTY	315	13.156	13.592	2.607	1.00	12.93
	ATOM	2640	CB	PTY	315	13.718	12.317	3.224	1.00	12.89
35	ATOM	2641	CG	PTY	315	13.105	11.093	2.629	1.00	10.77
	ATOM	2642	CD1	PTY	315	11.907	10.560	3.135	1.00	4.78
	ATOM	2643	CE1	PTY	315	11.301	9.445	2.546	1.00	10.51
	ATOM	2644	CD2	PTY	315	13.680	10.470	1.504	1.00	10.84
	ATOM	2645	CE2	PTY	315	13.085	9.361	0.895	1.00	11.24

	ATOM	2646	CZ	PTY	315	11.887	8.828	1.407	1.00	12.06
	ATOM	2647	OH	PTY	315	11.369	7.695	0.799	1.00	10.74
	ATOM	2648	OR1	PTY	315	9.804	6.760	-0.809	1.00	19.02
	ATOM	2649	OR2	PTY	315	9.041	8.574	0.508	1.00	16.68
5	ATOM	2650	OR3	PTY	315	9.423	6.511	1.512	1.00	18.31
	ATOM	2651	PR	PTY	315	9.871	7.408	0.478	1.00	5.42
	ATOM	2652	C	PTY	315	13.603	14.774	3.451	1.00	12.45
	ATOM	2653	O	PTY	315	14.708	15.296	3.294	1.00	12.95
	ATOM	2654	N	ASP	316	12.738	15.212	4.343	1.00	15.05
10	ATOM	2655	H	ASP	316	11.936	14.675	4.511	1.00	0.00
	ATOM	2656	CA	ASP	316	13.002	16.360	5.173	1.00	13.90
	ATOM	2657	CB	ASP	316	11.688	16.931	5.649	1.00	16.18
	ATOM	2658	CG	ASP	316	10.975	17.923	4.741	1.00	20.73
	ATOM	2659	OD1	ASP	316	10.924	17.743	3.529	1.00	19.42
15	ATOM	2660	OD2	ASP	316	10.443	18.893	5.274	1.00	27.82
	ATOM	2661	C	ASP	316	13.866	15.995	6.357	1.00	14.41
	ATOM	2662	O	ASP	316	13.970	14.838	6.776	1.00	15.75
	ATOM	2663	N	VAL	317	14.519	17.004	6.913	1.00	15.30
	ATOM	2664	H	VAL	317	14.334	17.922	6.631	1.00	0.00
20	ATOM	2665	CA	VAL	317	15.385	16.846	8.073	1.00	14.94
	ATOM	2666	CB	VAL	317	16.858	17.146	7.739	1.00	14.44
	ATOM	2667	CG1	VAL	317	17.448	15.947	7.004	1.00	15.76
	ATOM	2668	CG2	VAL	317	16.981	18.357	6.832	1.00	16.92
	ATOM	2669	C	VAL	317	14.871	17.842	9.083	1.00	14.10
25	ATOM	2670	O	VAL	317	14.248	18.845	8.712	1.00	17.30
	ATOM	2671	N	LEU	318	15.029	17.480	10.349	1.00	12.16
	ATOM	2672	H	LEU	318	15.548	16.671	10.535	1.00	0.00
	ATOM	2673	CA	LEU	318	14.624	18.329	11.451	1.00	14.05
	ATOM	2674	CB	LEU	318	14.818	17.637	12.790	1.00	13.29
30	ATOM	2675	CG	LEU	318	14.067	16.364	13.069	1.00	4.19
	ATOM	2676	CD1	LEU	318	14.669	15.703	14.270	1.00	3.04
	ATOM	2677	CD2	LEU	318	12.625	16.643	13.287	1.00	2.00
	ATOM	2678	C	LEU	318	15.537	19.537	11.433	1.00	16.18
	ATOM	2679	O	LEU	318	16.665	19.398	10.961	1.00	13.67
35	ATOM	2680	N	ASP	319	15.117	20.707	11.882	1.00	26.49
	ATOM	2681	H	ASP	319	14.247	20.848	12.302	1.00	0.00
	ATOM	2682	CA	ASP	319	16.062	21.792	11.942	1.00	34.53
	ATOM	2683	CB	ASP	319	15.636	22.871	10.880	1.00	39.93
	ATOM	2684	CG	ASP	319	14.637	23.977	11.210	1.00	46.93

	ATOM	2685	OD1	ASP	319	13.509	23.928	10.710	1.00	52.84
	ATOM	2686	OD2	ASP	319	15.003	24.906	11.941	1.00	52.04
	ATOM	2687	C	ASP	319	16.064	22.270	13.401	1.00	36.49
	ATOM	2688	O	ASP	319	14.996	22.586	13.944	1.00	37.04
5	ATOM	2689	OT	ASP	319	17.140	22.239	14.004	1.00	36.34
	ATOM	2690	CB	ASP	1003	43.142	-13.016	13.156	1.00	53.93
	ATOM	2691	CG	ASP	1003	43.106	-12.430	14.568	1.00	55.01
	ATOM	2692	OD1	ASP	1003	44.109	-11.869	15.000	1.00	54.01
	ATOM	2693	OD2	ASP	1003	42.091	-12.567	15.252	1.00	58.11
10	ATOM	2694	C	ASP	1003	44.166	-11.129	11.729	1.00	46.97
	ATOM	2695	O	ASP	1003	45.204	-11.666	11.320	1.00	50.37
	ATOM	2696	HT1	ASP	1003	44.012	-13.030	10.569	1.00	0.00
	ATOM	2697	HT2	ASP	1003	42.591	-12.376	9.952	1.00	0.00
	ATOM	2698	N	ASP	1003	42.996	-12.885	10.758	1.00	53.96
15	ATOM	2699	HT3	ASP	1003	42.524	-13.800	10.916	1.00	0.00
	ATOM	2700	CA	ASP	1003	42.970	-12.063	11.955	1.00	49.69
	ATOM	2701	N	PRO	1004	44.151	-9.802	11.904	1.00	43.37
	ATOM	2702	CD	PRO	1004	42.945	-8.991	12.008	1.00	42.38
	ATOM	2703	CA	PRO	1004	45.344	-8.948	11.771	1.00	42.64
20	ATOM	2704	CB	PRO	1004	44.794	-7.522	11.801	1.00	39.86
	ATOM	2705	CG	PRO	1004	43.467	-7.643	12.503	1.00	40.49
	ATOM	2706	C	PRO	1004	46.477	-9.175	12.780	1.00	41.41
	ATOM	2707	O	PRO	1004	47.559	-8.570	12.685	1.00	39.94
	ATOM	2708	N	ALA	1005	46.242	-10.044	13.772	1.00	39.65
25	ATOM	2709	H	ALA	1005	45.323	-10.276	14.007	1.00	0.00
	ATOM	2710	CA	ALA	1005	47.290	-10.440	14.688	1.00	31.86
	ATOM	2711	CB	ALA	1005	46.785	-10.334	16.117	1.00	30.50
	ATOM	2712	C	ALA	1005	47.801	-11.850	14.451	1.00	28.13
	ATOM	2713	O	ALA	1005	48.889	-12.126	14.931	1.00	27.62
30	ATOM	2714	N	ALA	1006	47.227	-12.783	13.671	1.00	30.30
	ATOM	2715	H	ALA	1006	46.450	-12.533	13.136	1.00	0.00
	ATOM	2716	CA	ALA	1006	47.757	-14.165	13.610	1.00	29.17
	ATOM	2717	CB	ALA	1006	46.836	-15.035	12.767	1.00	31.01
	ATOM	2718	C	ALA	1006	49.186	-14.409	13.109	1.00	29.99
35	ATOM	2719	O	ALA	1006	49.832	-15.435	13.328	1.00	30.85
	ATOM	2720	N	HIS	1007	49.713	-13.387	12.465	1.00	29.64
	ATOM	2721	H	HIS	1007	49.168	-12.584	12.420	1.00	0.00
	ATOM	2722	CA	HIS	1007	51.077	-13.401	11.952	1.00	31.60
	ATOM	2723	CB	HIS	1007	51.162	-12.602	10.648	1.00	32.94

	ATOM	2724	CG	HIS	1007	50.861	-11.131	10.902	1.00	36.73
	ATOM	2725	CD2	HIS	1007	49.606	-10.560	10.876	1.00	38.63
	ATOM	2726	ND1	HIS	1007	51.734	-10.193	11.247	1.00	39.17
	ATOM	2727	HD1	HIS	1007	52.690	-10.342	11.446	1.00	0.00
5	ATOM	2728	CE1	HIS	1007	51.062	-9.078	11.434	1.00	41.04
	ATOM	2729	NE2	HIS	1007	49.789	-9.313	11.213	1.00	40.15
	ATOM	2730	HE2	HIS	1007	49.059	-8.678	11.422	1.00	0.00
	ATOM	2731	C	HIS	1007	52.050	-12.781	12.946	1.00	30.36
	ATOM	2732	O	HIS	1007	53.158	-12.386	12.576	1.00	31.97
10	ATOM	2733	N	LEU	1008	51.592	-12.480	14.151	1.00	26.41
	ATOM	2734	H	LEU	1008	50.742	-12.852	14.476	1.00	0.00
	ATOM	2735	CA	LEU	1008	52.427	-11.828	15.126	1.00	24.03
	ATOM	2736	CB	LEU	1008	51.558	-10.849	15.911	1.00	20.44
	ATOM	2737	CG	LEU	1008	51.829	-9.348	15.835	1.00	19.01
15	ATOM	2738	CD1	LEU	1008	52.484	-8.962	14.531	1.00	15.31
	ATOM	2739	CD2	LEU	1008	50.513	-8.620	16.018	1.00	18.56
	ATOM	2740	C	LEU	1008	52.963	-12.958	15.979	1.00	24.31
	ATOM	2741	O	LEU	1008	52.181	-13.829	16.350	1.00	21.63
	ATOM	2742	N	PRO	1009	54.245	-13.032	16.334	1.00	25.92
20	ATOM	2743	CD	PRO	1009	55.280	-12.055	15.973	1.00	29.07
	ATOM	2744	CA	PRO	1009	54.787	-14.159	17.084	1.00	26.60
	ATOM	2745	CB	PRO	1009	56.285	-14.047	16.806	1.00	28.94
	ATOM	2746	CG	PRO	1009	56.538	-12.546	16.691	1.00	27.11
	ATOM	2747	C	PRO	1009	54.405	-14.163	18.566	1.00	24.10
25	ATOM	2748	O	PRO	1009	54.692	-15.112	19.297	1.00	25.51
	ATOM	2749	N	PHE	1010	53.788	-13.089	19.060	1.00	20.53
	ATOM	2750	H	PHE	1010	53.497	-12.388	18.445	1.00	0.00
	ATOM	2751	CA	PHE	1010	53.398	-12.960	20.459	1.00	20.39
	ATOM	2752	CB	PHE	1010	53.950	-11.636	21.035	1.00	19.73
30	ATOM	2753	CG	PHE	1010	53.756	-10.406	20.161	1.00	16.45
	ATOM	2754	CD1	PHE	1010	52.546	-9.728	20.140	1.00	17.02
	ATOM	2755	CD2	PHE	1010	54.816	-9.958	19.376	1.00	23.44
	ATOM	2756	CE1	PHE	1010	52.397	-8.599	19.332	1.00	21.75
	ATOM	2757	CE2	PHE	1010	54.667	-8.827	18.567	1.00	21.56
35	ATOM	2758	CZ	PHE	1010	53.456	-8.142	18.544	1.00	18.10
	ATOM	2759	C	PHE	1010	51.888	-13.006	20.636	1.00	20.98
	ATOM	2760	O	PHE	1010	51.374	-12.658	21.699	1.00	20.72
	ATOM	2761	N	PHE	1011	51.182	-13.399	19.565	1.00	15.13
	ATOM	2762	H	PHE	1011	51.635	-13.830	18.814	1.00	0.00

	ATOM	2763	CA	PHE	1011	49.748	-13.457	19.564	1.00	11.64
	ATOM	2764	CB	PHE	1011	49.224	-13.105	18.175	1.00	9.39
	ATOM	2765	CG	PHE	1011	47.716	-13.279	18.066	1.00	10.72
	ATOM	2766	CD1	PHE	1011	46.856	-12.628	18.960	1.00	7.85
5	ATOM	2767	CD2	PHE	1011	47.200	-14.136	17.096	1.00	9.06
	ATOM	2768	CE1	PHE	1011	45.488	-12.846	18.889	1.00	4.55
	ATOM	2769	CE2	PHE	1011	45.824	-14.347	17.029	1.00	9.37
	ATOM	2770	CZ	PHE	1011	44.974	-13.702	17.929	1.00	7.19
	ATOM	2771	C	PHE	1011	49.413	-14.891	19.933	1.00	13.64
10	ATOM	2772	O	PHE	1011	49.963	-15.834	19.365	1.00	13.56
	ATOM	2773	N	TYR	1012	48.496	-15.092	20.870	1.00	13.88
	ATOM	2774	H	TYR	1012	48.085	-14.317	21.306	1.00	0.00
	ATOM	2775	CA	TYR	1012	48.204	-16.427	21.346	1.00	14.06
	ATOM	2776	CB	TYR	1012	48.456	-16.449	22.842	1.00	13.70
15	ATOM	2777	CG	TYR	1012	49.930	-16.553	23.172	1.00	10.19
	ATOM	2778	CD1	TYR	1012	50.738	-15.427	23.116	1.00	8.33
	ATOM	2779	CE1	TYR	1012	52.086	-15.504	23.417	1.00	11.13
	ATOM	2780	CD2	TYR	1012	50.464	-17.783	23.531	1.00	15.69
	ATOM	2781	CE2	TYR	1012	51.820	-17.871	23.839	1.00	18.91
20	ATOM	2782	CZ	TYR	1012	52.612	-16.728	23.782	1.00	17.41
	ATOM	2783	OH	TYR	1012	53.929	-16.816	24.155	1.00	19.18
	ATOM	2784	HH	TYR	1012	54.334	-15.949	23.998	1.00	0.00
	ATOM	2785	C	TYR	1012	46.821	-16.971	21.048	1.00	14.86
	ATOM	2786	O	TYR	1012	46.537	-18.146	21.309	1.00	14.54
25	ATOM	2787	N	GLY	1013	45.948	-16.193	20.413	1.00	15.74
	ATOM	2788	H	GLY	1013	46.199	-15.277	20.194	1.00	0.00
	ATOM	2789	CA	GLY	1013	44.602	-16.654	20.123	1.00	12.83
	ATOM	2790	C	GLY	1013	43.768	-16.522	21.380	1.00	13.78
	ATOM	2791	O	GLY	1013	44.088	-15.717	22.260	1.00	12.71
30	ATOM	2792	N	SER	1014	42.692	-17.277	21.461	1.00	14.40
	ATOM	2793	H	SER	1014	42.460	-17.891	20.729	1.00	0.00
	ATOM	2794	CA	SER	1014	41.790	-17.228	22.572	1.00	19.95
	ATOM	2795	CB	SER	1014	40.446	-17.759	22.077	1.00	21.51
	ATOM	2796	OG	SER	1014	40.140	-17.212	20.789	1.00	23.00
35	ATOM	2797	HG	SER	1014	39.581	-16.430	20.875	1.00	0.00
	ATOM	2798	C	SER	1014	42.335	-18.038	23.735	1.00	21.75
	ATOM	2799	O	SER	1014	42.025	-19.222	23.887	1.00	27.85
	ATOM	2800	N	ILE	1015	43.242	-17.436	24.506	1.00	22.37
	ATOM	2801	H	ILE	1015	43.553	-16.542	24.252	1.00	0.00

	ATOM	2802	CA	ILE	1015	43.755	-18.030	25.737	1.00	18.94
	ATOM	2803	CB	ILE	1015	45.300	-17.928	25.823	1.00	14.49
	ATOM	2804	CG2	ILE	1015	45.816	-18.827	24.712	1.00	10.66
	ATOM	2805	CG1	ILE	1015	45.828	-16.508	25.738	1.00	5.38
5	ATOM	2806	CD	ILE	1015	47.306	-16.402	26.087	1.00	4.01
	ATOM	2807	C	ILE	1015	43.133	-17.261	26.894	1.00	18.07
	ATOM	2808	O	ILE	1015	42.731	-16.114	26.688	1.00	15.23
	ATOM	2809	N	SER	1016	43.011	-17.835	28.091	1.00	17.60
	ATOM	2810	H	SER	1016	43.360	-18.737	28.240	1.00	0.00
10	ATOM	2811	CA	SER	1016	42.414	-17.128	29.211	1.00	17.39
	ATOM	2812	CB	SER	1016	41.797	-18.106	30.225	1.00	13.17
	ATOM	2813	OG	SER	1016	42.766	-19.003	30.737	1.00	18.24
	ATOM	2814	HG	SER	1016	42.913	-19.673	30.056	1.00	0.00
	ATOM	2815	C	SER	1016	43.474	-16.305	29.907	1.00	15.97
15	ATOM	2816	O	SER	1016	44.662	-16.478	29.609	1.00	20.64
	ATOM	2817	N	ARG	1017	43.088	-15.451	30.866	1.00	18.56
	ATOM	2818	H	ARG	1017	42.137	-15.409	31.087	1.00	0.00
	ATOM	2819	CA	ARG	1017	44.027	-14.653	31.653	1.00	16.01
	ATOM	2820	CB	ARG	1017	43.262	-13.808	32.672	1.00	17.86
20	ATOM	2821	CG	ARG	1017	44.157	-12.902	33.519	1.00	10.59
	ATOM	2822	CD	ARG	1017	43.366	-12.149	34.570	1.00	8.03
	ATOM	2823	NE	ARG	1017	42.474	-11.197	33.952	1.00	11.62
	ATOM	2824	HE	ARG	1017	42.024	-11.439	33.117	1.00	0.00
	ATOM	2825	CZ	ARG	1017	42.184	-10.026	34.498	1.00	13.10
25	ATOM	2826	NH1	ARG	1017	42.697	-9.643	35.658	1.00	14.59
	ATOM	2827	HH11	ARG	1017	43.328	-10.244	36.148	1.00	0.00
	ATOM	2828	HH12	ARG	1017	42.461	-8.748	36.037	1.00	0.00
	ATOM	2829	NH2	ARG	1017	41.347	-9.228	33.854	1.00	15.19
	ATOM	2830	HH21	ARG	1017	40.952	-9.522	32.984	1.00	0.00
30	ATOM	2831	HH22	ARG	1017	41.112	-8.334	34.236	1.00	0.00
	ATOM	2832	C	ARG	1017	45.001	-15.567	32.383	1.00	16.72
	ATOM	2833	O	ARG	1017	46.202	-15.294	32.469	1.00	22.39
	ATOM	2834	N	ALA	1018	44.481	-16.675	32.906	1.00	21.82
	ATOM	2835	H	ALA	1018	43.505	-16.792	32.879	1.00	0.00
35	ATOM	2836	CA	ALA	1018	45.274	-17.667	33.611	1.00	19.48
	ATOM	2837	CB	ALA	1018	44.380	-18.824	34.070	1.00	18.63
	ATOM	2838	C	ALA	1018	46.356	-18.208	32.707	1.00	20.25
	ATOM	2839	O	ALA	1018	47.521	-18.209	33.097	1.00	23.41
	ATOM	2840	N	GLU	1019	46.018	-18.541	31.453	1.00	26.17

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	ATOM	2841	H	GLU	1019	45.097	-18.382	31.148	1.00	0.00
	ATOM	2842	CA	GLU	1019	47.007	-19.117	30.559	1.00	25.54
	ATOM	2843	CB	GLU	1019	46.331	-19.816	29.366	1.00	32.42
	ATOM	2844	CG	GLU	1019	47.353	-20.841	28.796	1.00	48.31
5	ATOM	2845	CD	GLU	1019	46.940	-21.712	27.601	1.00	54.58
	ATOM	2846	OE1	GLU	1019	45.954	-22.447	27.709	1.00	61.36
	ATOM	2847	OE2	GLU	1019	47.618	-21.681	26.568	1.00	56.27
	ATOM	2848	C	GLU	1019	47.976	-18.080	30.045	1.00	20.28
	ATOM	2849	O	GLU	1019	49.125	-18.401	29.708	1.00	22.96
10	ATOM	2850	N	ALA	1020	47.535	-16.831	29.929	1.00	20.31
	ATOM	2851	H	ALA	1020	46.592	-16.654	30.134	1.00	0.00
	ATOM	2852	CA	ALA	1020	48.372	-15.704	29.515	1.00	14.33
	ATOM	2853	CB	ALA	1020	47.532	-14.431	29.359	1.00	10.33
	ATOM	2854	C	ALA	1020	49.424	-15.451	30.587	1.00	17.38
15	ATOM	2855	O	ALA	1020	50.621	-15.470	30.283	1.00	20.66
	ATOM	2856	N	GLU	1021	48.992	-15.301	31.843	1.00	20.59
	ATOM	2857	H	GLU	1021	48.029	-15.342	32.004	1.00	0.00
	ATOM	2858	CA	GLU	1021	49.877	-15.110	32.982	1.00	23.11
	ATOM	2859	CB	GLU	1021	49.070	-14.931	34.246	1.00	22.53
20	ATOM	2860	CG	GLU	1021	48.343	-13.605	34.247	1.00	17.51
	ATOM	2861	CD	GLU	1021	47.521	-13.292	35.485	1.00	22.86
	ATOM	2862	OE1	GLU	1021	47.081	-12.150	35.589	1.00	26.96
	ATOM	2863	OE2	GLU	1021	47.303	-14.160	36.338	1.00	31.30
	ATOM	2864	C	GLU	1021	50.831	-16.271	33.181	1.00	22.56
25	ATOM	2865	O	GLU	1021	51.999	-16.024	33.469	1.00	24.82
	ATOM	2866	N	GLU	1022	50.422	-17.533	32.999	1.00	26.01
	ATOM	2867	H	GLU	1022	49.465	-17.718	32.877	1.00	0.00
	ATOM	2868	CA	GLU	1022	51.361	-18.649	33.072	1.00	28.78
	ATOM	2869	CB	GLU	1022	50.708	-20.001	32.767	1.00	32.14
30	ATOM	2870	CG	GLU	1022	49.564	-20.417	33.691	1.00	41.37
	ATOM	2871	CD	GLU	1022	49.750	-20.078	35.168	1.00	47.97
	ATOM	2872	OE1	GLU	1022	50.608	-20.686	35.813	1.00	50.55
	ATOM	2873	OE2	GLU	1022	49.036	-19.195	35.663	1.00	51.22
	ATOM	2874	C	GLU	1022	52.488	-18.469	32.080	1.00	29.05
35	ATOM	2875	O	GLU	1022	53.647	-18.612	32.469	1.00	30.51
	ATOM	2876	N	HIS	1023	52.147	-18.072	30.835	1.00	29.07
	ATOM	2877	H	HIS	1023	51.192	-17.931	30.660	1.00	0.00
	ATOM	2878	CA	HIS	1023	53.099	-17.785	29.768	1.00	23.70
	ATOM	2879	CB	HIS	1023	52.402	-17.389	28.463	1.00	26.84

	ATOM	2880	CG	HIS	1023	51.754	-18.539	27.700	1.00	21.08
	ATOM	2881	CD2	HIS	1023	52.452	-19.570	27.112	1.00	19.12
	ATOM	2882	ND1	HIS	1023	50.457	-18.741	27.451	1.00	18.71
	ATOM	2883	HD1	HIS	1023	49.706	-18.258	27.867	1.00	0.00
5	ATOM	2884	CE1	HIS	1023	50.345	-19.836	26.738	1.00	15.87
	ATOM	2885	NE2	HIS	1023	51.548	-20.329	26.541	1.00	17.83
	ATOM	2886	HE2	HIS	1023	51.752	-21.134	26.020	1.00	0.00
	ATOM	2887	C	HIS	1023	54.043	-16.662	30.107	1.00	20.78
	ATOM	2888	O	HIS	1023	55.247	-16.815	29.895	1.00	24.83
10	ATOM	2889	N	LEU	1024	53.578	-15.531	30.628	1.00	22.60
	ATOM	2890	H	LEU	1024	52.612	-15.418	30.757	1.00	0.00
	ATOM	2891	CA	LEU	1024	54.489	-14.462	31.036	1.00	24.27
	ATOM	2892	CB	LEU	1024	53.753	-13.210	31.558	1.00	24.96
	ATOM	2893	CG	LEU	1024	53.085	-12.073	30.735	1.00	22.86
15	ATOM	2894	CD1	LEU	1024	53.723	-12.000	29.373	1.00	19.34
	ATOM	2895	CD2	LEU	1024	51.605	-12.301	30.571	1.00	18.19
	ATOM	2896	C	LEU	1024	55.404	-14.940	32.163	1.00	28.32
	ATOM	2897	O	LEU	1024	56.605	-14.641	32.186	1.00	30.07
	ATOM	2898	N	LYS	1025	54.863	-15.712	33.115	1.00	33.91
20	ATOM	2899	H	LYS	1025	53.911	-15.931	33.060	1.00	0.00
	ATOM	2900	CA	LYS	1025	55.640	-16.233	34.239	1.00	35.35
	ATOM	2901	CB	LYS	1025	54.782	-17.080	35.183	1.00	38.19
	ATOM	2902	CG	LYS	1025	53.976	-16.173	36.102	1.00	40.50
	ATOM	2903	CD	LYS	1025	53.101	-16.863	37.152	1.00	42.76
25	ATOM	2904	CE	LYS	1025	51.986	-17.672	36.534	1.00	40.89
	ATOM	2905	NZ	LYS	1025	51.138	-18.245	37.560	1.00	45.64
	ATOM	2906	HZ1	LYS	1025	50.393	-18.818	37.119	1.00	0.00
	ATOM	2907	HZ2	LYS	1025	50.696	-17.477	38.105	1.00	0.00
	ATOM	2908	HZ3	LYS	1025	51.705	-18.843	38.193	1.00	0.00
30	ATOM	2909	C	LYS	1025	56.770	-17.090	33.731	1.00	34.63
	ATOM	2910	O	LYS	1025	57.936	-16.854	34.046	1.00	36.50
	ATOM	2911	N	LEU	1026	56.426	-18.031	32.857	1.00	37.51
	ATOM	2912	H	LEU	1026	55.483	-18.128	32.621	1.00	0.00
	ATOM	2913	CA	LEU	1026	57.402	-18.908	32.245	1.00	35.08
35	ATOM	2914	CB	LEU	1026	56.671	-19.965	31.406	1.00	35.34
	ATOM	2915	CG	LEU	1026	55.672	-20.873	32.167	1.00	34.52
	ATOM	2916	CD1	LEU	1026	55.241	-22.004	31.260	1.00	34.74
	ATOM	2917	CD2	LEU	1026	56.297	-21.471	33.418	1.00	31.16
	ATOM	2918	C	LEU	1026	58.388	-18.115	31.408	1.00	34.31

	ATOM	2919	O	LEU	1026	59.576	-18.431	31.418	1.00	37.02
	ATOM	2920	N	ALA	1027	58.007	-17.022	30.749	1.00	36.27
	ATOM	2921	H	ALA	1027	57.062	-16.764	30.756	1.00	0.00
	ATOM	2922	CA	ALA	1027	58.969	-16.177	30.032	1.00	38.06
5	ATOM	2923	CB	ALA	1027	58.185	-15.258	29.091	1.00	39.20
	ATOM	2924	C	ALA	1027	59.879	-15.327	30.956	1.00	40.05
	ATOM	2925	O	ALA	1027	60.436	-14.291	30.568	1.00	42.49
	ATOM	2926	N	GLY	1028	60.042	-15.701	32.228	1.00	42.21
	ATOM	2927	H	GLY	1028	59.563	-16.479	32.578	1.00	0.00
10	ATOM	2928	CA	GLY	1028	60.911	-15.002	33.146	1.00	41.60
	ATOM	2929	C	GLY	1028	60.320	-13.705	33.688	1.00	42.47
	ATOM	2930	O	GLY	1028	61.123	-12.858	34.082	1.00	45.26
	ATOM	2931	N	MET	1029	58.999	-13.445	33.704	1.00	39.68
	ATOM	2932	H	MET	1029	58.405	-14.085	33.254	1.00	0.00
15	ATOM	2933	CA	MET	1029	58.415	-12.229	34.296	1.00	39.81
	ATOM	2934	CB	MET	1029	58.204	-12.492	35.780	1.00	37.74
	ATOM	2935	CG	MET	1029	57.191	-13.558	36.080	1.00	34.82
	ATOM	2936	SD	MET	1029	55.548	-13.160	35.465	1.00	37.33
	ATOM	2937	CE	MET	1029	55.139	-11.863	36.592	1.00	28.27
20	ATOM	2938	C	MET	1029	59.106	-10.850	34.145	1.00	41.56
	ATOM	2939	O	MET	1029	58.930	-9.913	34.953	1.00	43.62
	ATOM	2940	N	ALA	1030	59.892	-10.700	33.074	1.00	41.39
	ATOM	2941	H	ALA	1030	59.990	-11.464	32.474	1.00	0.00
	ATOM	2942	CA	ALA	1030	60.625	-9.484	32.791	1.00	39.08
25	ATOM	2943	CB	ALA	1030	61.401	-9.669	31.495	1.00	37.10
	ATOM	2944	C	ALA	1030	59.718	-8.269	32.674	1.00	40.79
	ATOM	2945	O	ALA	1030	58.540	-8.363	32.315	1.00	39.87
	ATOM	2946	N	ASP	1031	60.262	-7.100	32.994	1.00	43.06
	ATOM	2947	H	ASP	1031	61.220	-7.054	33.170	1.00	0.00
30	ATOM	2948	CA	ASP	1031	59.483	-5.883	32.928	1.00	46.24
	ATOM	2949	CB	ASP	1031	60.222	-4.768	33.674	1.00	50.38
	ATOM	2950	CG	ASP	1031	59.322	-3.657	34.202	1.00	52.70
	ATOM	2951	OD1	ASP	1031	59.536	-3.217	35.330	1.00	55.84
	ATOM	2952	OD2	ASP	1031	58.406	-3.232	33.502	1.00	54.94
35	ATOM	2953	C	ASP	1031	59.342	-5.564	31.446	1.00	45.89
	ATOM	2954	O	ASP	1031	60.282	-5.798	30.682	1.00	48.59
	ATOM	2955	N	GLY	1032	58.159	-5.114	31.029	1.00	45.12
	ATOM	2956	H	GLY	1032	57.428	-5.032	31.670	1.00	0.00
	ATOM	2957	CA	GLY	1032	57.872	-4.794	29.638	1.00	39.58

	ATOM	2958	C	GLY	1032	57.597	-6.031	28.788	1.00	37.39
	ATOM	2959	O	GLY	1032	57.438	-5.940	27.563	1.00	36.99
	ATOM	2960	N	LEU	1033	57.585	-7.218	29.397	1.00	33.89
	ATOM	2961	H	LEU	1033	57.724	-7.251	30.367	1.00	0.00
5	ATOM	2962	CA	LEU	1033	57.259	-8.459	28.716	1.00	28.02
	ATOM	2963	CB	LEU	1033	57.502	-9.640	29.646	1.00	26.51
	ATOM	2964	CG	LEU	1033	57.337	-11.085	29.224	1.00	22.78
	ATOM	2965	CD1	LEU	1033	58.468	-11.545	28.347	1.00	18.85
	ATOM	2966	CD2	LEU	1033	57.322	-11.918	30.487	1.00	19.74
10	ATOM	2967	C	LEU	1033	55.776	-8.298	28.427	1.00	26.53
	ATOM	2968	O	LEU	1033	55.029	-7.838	29.302	1.00	23.41
	ATOM	2969	N	PHE	1034	55.363	-8.589	27.198	1.00	24.15
	ATOM	2970	H	PHE	1034	56.006	-8.911	26.529	1.00	0.00
	ATOM	2971	CA	PHE	1034	53.976	-8.439	26.822	1.00	21.19
15	ATOM	2972	CB	PHE	1034	53.761	-7.092	26.100	1.00	21.77
	ATOM	2973	CG	PHE	1034	54.457	-6.953	24.744	1.00	23.54
	ATOM	2974	CD1	PHE	1034	53.722	-7.110	23.570	1.00	27.19
	ATOM	2975	CD2	PHE	1034	55.818	-6.664	24.665	1.00	24.54
	ATOM	2976	CE1	PHE	1034	54.343	-6.983	22.333	1.00	25.67
20	ATOM	2977	CE2	PHE	1034	56.436	-6.534	23.422	1.00	24.17
	ATOM	2978	CZ	PHE	1034	55.702	-6.694	22.259	1.00	24.71
	ATOM	2979	C	PHE	1034	53.571	-9.571	25.908	1.00	20.13
	ATOM	2980	O	PHE	1034	54.417	-10.319	25.405	1.00	20.20
	ATOM	2981	N	LEU	1035	52.284	-9.686	25.641	1.00	21.17
25	ATOM	2982	H	LEU	1035	51.633	-9.098	26.081	1.00	0.00
	ATOM	2983	CA	LEU	1035	51.775	-10.647	24.685	1.00	19.77
	ATOM	2984	CB	LEU	1035	51.654	-12.048	25.333	1.00	20.30
	ATOM	2985	CG	LEU	1035	50.695	-12.462	26.447	1.00	12.94
	ATOM	2986	CD1	LEU	1035	49.314	-12.804	25.946	1.00	14.01
30	ATOM	2987	CD2	LEU	1035	51.181	-13.777	26.987	1.00	12.52
	ATOM	2988	C	LEU	1035	50.415	-10.122	24.256	1.00	18.47
	ATOM	2989	O	LEU	1035	49.817	-9.268	24.938	1.00	13.42
	ATOM	2990	N	LEU	1036	49.905	-10.668	23.154	1.00	17.71
	ATOM	2991	H	LEU	1036	50.390	-11.397	22.713	1.00	0.00
35	ATOM	2992	CA	LEU	1036	48.602	-10.296	22.636	1.00	17.41
	ATOM	2993	CB	LEU	1036	48.862	-9.725	21.252	1.00	15.80
	ATOM	2994	CG	LEU	1036	47.848	-8.867	20.504	1.00	21.02
	ATOM	2995	CD1	LEU	1036	47.484	-7.615	21.281	1.00	12.72
	ATOM	2996	CD2	LEU	1036	48.479	-8.470	19.168	1.00	21.07

	ATOM	2997	C	LEU	1036	47.675	-11.526	22.636	1.00	15.31
	ATOM	2998	O	LEU	1036	48.100	-12.643	22.317	1.00	14.62
	ATOM	2999	N	ARG	1037	46.401	-11.417	23.034	1.00	14.85
	ATOM	3000	H	ARG	1037	46.037	-10.536	23.270	1.00	0.00
5	ATOM	3001	CA	ARG	1037	45.486	-12.558	23.011	1.00	14.73
	ATOM	3002	CB	ARG	1037	45.303	-13.143	24.403	1.00	12.40
	ATOM	3003	CG	ARG	1037	44.799	-12.232	25.502	1.00	11.81
	ATOM	3004	CD	ARG	1037	44.980	-13.004	26.799	1.00	18.91
	ATOM	3005	NE	ARG	1037	45.018	-12.174	27.995	1.00	13.00
10	ATOM	3006	HE	ARG	1037	45.850	-11.703	28.210	1.00	0.00
	ATOM	3007	CZ	ARG	1037	43.963	-12.015	28.790	1.00	8.56
	ATOM	3008	NH1	ARG	1037	42.788	-12.578	28.579	1.00	4.18
	ATOM	3009	HH11	ARG	1037	42.647	-13.162	27.780	1.00	0.00
	ATOM	3010	HH12	ARG	1037	42.038	-12.409	29.219	1.00	0.00
15	ATOM	3011	NH2	ARG	1037	44.111	-11.263	29.863	1.00	15.54
	ATOM	3012	HH21	ARG	1037	45.000	-10.842	30.042	1.00	0.00
	ATOM	3013	HH22	ARG	1037	43.362	-11.129	30.503	1.00	0.00
	ATOM	3014	C	ARG	1037	44.144	-12.076	22.487	1.00	15.15
	ATOM	3015	O	ARG	1037	43.870	-10.880	22.529	1.00	18.16
20	ATOM	3016	N	GLN	1038	43.274	-12.913	21.947	1.00	15.48
	ATOM	3017	H	GLN	1038	43.461	-13.872	21.999	1.00	0.00
	ATOM	3018	CA	GLN	1038	41.997	-12.454	21.426	1.00	14.10
	ATOM	3019	CB	GLN	1038	41.373	-13.521	20.540	1.00	18.15
	ATOM	3020	CG	GLN	1038	40.006	-13.156	19.989	1.00	28.15
25	ATOM	3021	CD	GLN	1038	39.307	-14.246	19.187	1.00	34.24
	ATOM	3022	OE1	GLN	1038	38.715	-15.187	19.728	1.00	38.06
	ATOM	3023	NE2	GLN	1038	39.311	-14.134	17.871	1.00	37.72
	ATOM	3024	HE21	GLN	1038	39.718	-13.321	17.496	1.00	0.00
	ATOM	3025	HE22	GLN	1038	38.909	-14.848	17.342	1.00	0.00
30	ATOM	3026	C	GLN	1038	41.101	-12.214	22.617	1.00	16.07
	ATOM	3027	O	GLN	1038	41.119	-13.003	23.573	1.00	18.21
	ATOM	3028	N	CYS	1039	40.296	-11.154	22.554	1.00	12.03
	ATOM	3029	H	CYS	1039	40.277	-10.599	21.746	1.00	0.00
	ATOM	3030	CA	CYS	1039	39.372	-10.872	23.623	1.00	13.04
35	ATOM	3031	CB	CYS	1039	38.926	-9.451	23.477	1.00	9.29
	ATOM	3032	SG	CYS	1039	37.883	-8.919	24.843	1.00	18.16
	ATOM	3033	C	CYS	1039	38.179	-11.826	23.602	1.00	14.04
	ATOM	3034	O	CYS	1039	37.519	-12.057	22.579	1.00	14.09
	ATOM	3035	N	LEU	1040	37.900	-12.406	24.768	1.00	15.22

	ATOM	3036	H	LEU	1040	38.502	-12.212	25.526	1.00	0.00
	ATOM	3037	CA	LEU	1040	36.787	-13.319	24.969	1.00	9.91
	ATOM	3038	CB	LEU	1040	37.085	-14.214	26.168	1.00	12.52
	ATOM	3039	CG	LEU	1040	37.745	-15.585	26.056	1.00	11.84
5	ATOM	3040	CD1	LEU	1040	38.554	-15.722	24.770	1.00	13.81
	ATOM	3041	CD2	LEU	1040	38.561	-15.784	27.339	1.00	13.23
	ATOM	3042	C	LEU	1040	35.454	-12.620	25.195	1.00	11.13
	ATOM	3043	O	LEU	1040	34.418	-13.274	25.228	1.00	13.17
	ATOM	3044	N	ARG	1041	35.377	-11.311	25.374	1.00	12.13
10	ATOM	3045	H	ARG	1041	36.187	-10.764	25.346	1.00	0.00
	ATOM	3046	CA	ARG	1041	34.111	-10.669	25.679	1.00	10.99
	ATOM	3047	CB	ARG	1041	34.288	-9.748	26.874	1.00	12.91
	ATOM	3048	CG	ARG	1041	35.011	-10.409	28.044	1.00	15.73
	ATOM	3049	CD	ARG	1041	35.147	-9.425	29.170	1.00	18.18
15	ATOM	3050	NE	ARG	1041	36.250	-8.523	28.926	1.00	19.90
	ATOM	3051	HE	ARG	1041	37.154	-8.890	28.998	1.00	0.00
	ATOM	3052	CZ	ARG	1041	36.099	-7.224	28.699	1.00	14.29
	ATOM	3053	NH1	ARG	1041	34.902	-6.630	28.678	1.00	18.27
	ATOM	3054	HH11	ARG	1041	34.070	-7.163	28.831	1.00	0.00
20	ATOM	3055	HH12	ARG	1041	34.836	-5.648	28.501	1.00	0.00
	ATOM	3056	NH2	ARG	1041	37.194	-6.525	28.474	1.00	14.40
	ATOM	3057	HH21	ARG	1041	38.088	-6.972	28.482	1.00	0.00
	ATOM	3058	HH22	ARG	1041	37.125	-5.546	28.291	1.00	0.00
	ATOM	3059	C	ARG	1041	33.576	-9.862	24.520	1.00	13.52
25	ATOM	3060	O	ARG	1041	32.381	-9.559	24.485	1.00	14.23
	ATOM	3061	N	SER	1042	34.423	-9.463	23.581	1.00	15.67
	ATOM	3062	H	SER	1042	35.377	-9.669	23.602	1.00	0.00
	ATOM	3063	CA	SER	1042	33.974	-8.656	22.476	1.00	20.42
	ATOM	3064	CB	SER	1042	34.508	-7.256	22.661	1.00	25.01
30	ATOM	3065	OG	SER	1042	35.923	-7.314	22.764	1.00	29.54
	ATOM	3066	HG	SER	1042	36.266	-6.507	23.176	1.00	0.00
	ATOM	3067	C	SER	1042	34.426	-9.212	21.146	1.00	21.18
	ATOM	3068	O	SER	1042	35.579	-9.627	21.026	1.00	25.17
	ATOM	3069	N	LEU	1043	33.518	-9.265	20.173	1.00	19.97
35	ATOM	3070	H	LEU	1043	32.600	-9.025	20.392	1.00	0.00
	ATOM	3071	CA	LEU	1043	33.811	-9.648	18.798	1.00	24.42
	ATOM	3072	CB	LEU	1043	32.509	-9.609	17.961	1.00	24.11
	ATOM	3073	CG	LEU	1043	31.223	-10.342	18.414	1.00	26.18
	ATOM	3074	CD1	LEU	1043	30.091	-10.041	17.441	1.00	20.08

	ATOM	3075	CD2	LEU	1043	31.458	-11.837	18.459	1.00	27.15
	ATOM	3076	C	LEU	1043	34.852	-8.703	18.164	1.00	23.94
	ATOM	3077	O	LEU	1043	34.643	-7.491	18.066	1.00	27.05
	ATOM	3078	N	GLY	1044	36.012	-9.201	17.770	1.00	24.33
5	ATOM	3079	H	GLY	1044	36.200	-10.150	17.951	1.00	0.00
	ATOM	3080	CA	GLY	1044	36.996	-8.377	17.087	1.00	22.34
	ATOM	3081	C	GLY	1044	38.082	-7.770	17.961	1.00	22.83
	ATOM	3082	O	GLY	1044	39.124	-7.396	17.418	1.00	29.16
	ATOM	3083	N	GLY	1045	37.935	-7.661	19.282	1.00	22.47
10	ATOM	3084	H	GLY	1045	37.152	-8.068	19.709	1.00	0.00
	ATOM	3085	CA	GLY	1045	38.959	-7.050	20.113	1.00	17.57
	ATOM	3086	C	GLY	1045	40.081	-8.005	20.519	1.00	17.34
	ATOM	3087	O	GLY	1045	40.034	-9.226	20.291	1.00	17.24
	ATOM	3088	N	TYR	1046	41.082	-7.446	21.183	1.00	13.57
15	ATOM	3089	H	TYR	1046	40.988	-6.507	21.467	1.00	0.00
	ATOM	3090	CA	TYR	1046	42.234	-8.182	21.672	1.00	15.71
	ATOM	3091	CB	TYR	1046	43.490	-7.848	20.902	1.00	21.28
	ATOM	3092	CG	TYR	1046	43.413	-8.275	19.457	1.00	24.29
	ATOM	3093	CD1	TYR	1046	43.708	-9.590	19.084	1.00	22.08
20	ATOM	3094	CE1	TYR	1046	43.609	-9.958	17.742	1.00	29.88
	ATOM	3095	CD2	TYR	1046	43.023	-7.327	18.518	1.00	23.41
	ATOM	3096	CE2	TYR	1046	42.924	-7.693	17.184	1.00	32.25
	ATOM	3097	CZ	TYR	1046	43.217	-8.998	16.801	1.00	31.62
	ATOM	3098	OH	TYR	1046	43.118	-9.302	15.457	1.00	31.31
25	ATOM	3099	HH	TYR	1046	42.631	-8.575	15.048	1.00	0.00
	ATOM	3100	C	TYR	1046	42.491	-7.793	23.112	1.00	13.63
	ATOM	3101	O	TYR	1046	41.744	-6.969	23.620	1.00	14.97
	ATOM	3102	N	VAL	1047	43.467	-8.354	23.828	1.00	16.06
	ATOM	3103	H	VAL	1047	43.984	-9.086	23.428	1.00	0.00
30	ATOM	3104	CA	VAL	1047	43.835	-7.929	25.178	1.00	15.04
	ATOM	3105	CB	VAL	1047	43.330	-8.920	26.310	1.00	12.79
	ATOM	3106	CG1	VAL	1047	43.721	-8.413	27.705	1.00	5.01
	ATOM	3107	CG2	VAL	1047	41.820	-8.948	26.381	1.00	3.47
	ATOM	3108	C	VAL	1047	45.362	-7.937	25.119	1.00	15.77
35	ATOM	3109	O	VAL	1047	45.953	-8.849	24.517	1.00	10.22
	ATOM	3110	N	LEU	1048	45.977	-6.880	25.663	1.00	19.22
	ATOM	3111	H	LEU	1048	45.429	-6.147	26.016	1.00	0.00
	ATOM	3112	CA	LEU	1048	47.427	-6.758	25.804	1.00	20.69
	ATOM	3113	CB	LEU	1048	47.865	-5.299	25.610	1.00	24.41

	ATOM	3114	CG	LEU	1048	49.229	-4.886	25.045	1.00	24.96
	ATOM	3115	CD1	LEU	1048	50.347	-5.852	25.414	1.00	25.43
	ATOM	3116	CD2	LEU	1048	49.106	-4.886	23.533	1.00	30.87
	ATOM	3117	C	LEU	1048	47.754	-7.185	27.239	1.00	19.53
5	ATOM	3118	O	LEU	1048	47.194	-6.597	28.175	1.00	20.94
	ATOM	3119	N	SER	1049	48.578	-8.212	27.451	1.00	18.81
	ATOM	3120	H	SER	1049	48.977	-8.679	26.690	1.00	0.00
	ATOM	3121	CA	SER	1049	48.975	-8.629	28.776	1.00	19.55
	ATOM	3122	CB	SER	1049	48.671	-10.116	28.985	1.00	13.59
10	ATOM	3123	OG	SER	1049	47.253	-10.292	28.987	1.00	12.90
	ATOM	3124	HG	SER	1049	47.044	-10.337	28.034	1.00	0.00
	ATOM	3125	C	SER	1049	50.465	-8.350	28.857	1.00	23.25
	ATOM	3126	O	SER	1049	51.279	-8.800	28.051	1.00	27.44
	ATOM	3127	N	LEU	1050	50.806	-7.549	29.843	1.00	29.25
15	ATOM	3128	H	LEU	1050	50.116	-7.296	30.492	1.00	0.00
	ATOM	3129	CA	LEU	1050	52.137	-7.031	30.060	1.00	28.57
	ATOM	3130	CB	LEU	1050	51.960	-5.562	29.602	1.00	24.11
	ATOM	3131	CG	LEU	1050	52.540	-4.304	30.228	1.00	25.47
	ATOM	3132	CD1	LEU	1050	54.012	-4.129	29.911	1.00	25.51
20	ATOM	3133	CD2	LEU	1050	51.830	-3.120	29.611	1.00	27.22
	ATOM	3134	C	LEU	1050	52.561	-7.280	31.529	1.00	30.12
	ATOM	3135	O	LEU	1050	51.730	-7.499	32.430	1.00	28.70
	ATOM	3136	N	VAL	1051	53.860	-7.287	31.806	1.00	31.79
	ATOM	3137	H	VAL	1051	54.494	-7.177	31.065	1.00	0.00
25	ATOM	3138	CA	VAL	1051	54.401	-7.422	33.150	1.00	34.62
	ATOM	3139	CB	VAL	1051	55.474	-8.537	33.264	1.00	34.04
	ATOM	3140	CG1	VAL	1051	55.903	-8.689	34.701	1.00	36.53
	ATOM	3141	CG2	VAL	1051	54.926	-9.868	32.830	1.00	35.98
	ATOM	3142	C	VAL	1051	55.091	-6.086	33.424	1.00	38.18
30	ATOM	3143	O	VAL	1051	55.879	-5.549	32.634	1.00	35.79
	ATOM	3144	N	HIS	1052	54.811	-5.468	34.551	1.00	42.38
	ATOM	3145	H	HIS	1052	54.198	-5.900	35.181	1.00	0.00
	ATOM	3146	CA	HIS	1052	55.526	-4.270	34.925	1.00	46.55
	ATOM	3147	CB	HIS	1052	54.622	-3.054	34.980	1.00	47.71
35	ATOM	3148	CG	HIS	1052	55.292	-1.796	35.514	1.00	51.97
	ATOM	3149	CD2	HIS	1052	56.403	-1.215	34.957	1.00	50.95
	ATOM	3150	ND1	HIS	1052	54.920	-1.038	36.542	1.00	53.03
	ATOM	3151	HD1	HIS	1052	54.229	-1.225	37.214	1.00	0.00
	ATOM	3152	CE1	HIS	1052	55.751	-0.028	36.615	1.00	52.41

	ATOM	3153	NE2	HIS	1052	56.637	-0.145	35.657	1.00	52.66
	ATOM	3154	HE2	HIS	1052	57.240	0.580	35.383	1.00	0.00
	ATOM	3155	C	HIS	1052	55.905	-4.696	36.308	1.00	48.34
	ATOM	3156	O	HIS	1052	55.023	-4.788	37.157	1.00	50.78
5	ATOM	3157	N	ASP	1053	57.194	-5.005	36.440	1.00	51.11
	ATOM	3158	H	ASP	1053	57.743	-4.973	35.634	1.00	0.00
	ATOM	3159	CA	ASP	1053	57.851	-5.483	37.655	1.00	54.60
	ATOM	3160	CB	ASP	1053	58.239	-4.287	38.603	1.00	57.17
	ATOM	3161	CG	ASP	1053	57.191	-3.278	39.068	1.00	55.92
10	ATOM	3162	OD1	ASP	1053	57.343	-2.104	38.741	1.00	58.38
	ATOM	3163	OD2	ASP	1053	56.244	-3.647	39.761	1.00	55.18
	ATOM	3164	C	ASP	1053	57.098	-6.535	38.462	1.00	54.40
	ATOM	3165	O	ASP	1053	56.537	-6.320	39.534	1.00	56.76
	ATOM	3166	N	VAL	1054	57.101	-7.737	37.882	1.00	51.08
15	ATOM	3167	H	VAL	1054	57.591	-7.850	37.043	1.00	0.00
	ATOM	3168	CA	VAL	1054	56.472	-8.926	38.449	1.00	45.93
	ATOM	3169	CB	VAL	1054	57.278	-9.313	39.763	1.00	46.32
	ATOM	3170	CG1	VAL	1054	56.979	-10.757	40.164	1.00	48.05
	ATOM	3171	CG2	VAL	1054	58.788	-9.253	39.532	1.00	42.02
20	ATOM	3172	C	VAL	1054	54.953	-8.767	38.693	1.00	43.30
	ATOM	3173	O	VAL	1054	54.305	-9.578	39.358	1.00	39.79
	ATOM	3174	N	ARG	1055	54.297	-7.760	38.117	1.00	44.36
	ATOM	3175	H	ARG	1055	54.798	-7.059	37.658	1.00	0.00
	ATOM	3176	CA	ARG	1055	52.851	-7.588	38.236	1.00	44.68
25	ATOM	3177	CB	ARG	1055	52.474	-6.272	38.916	1.00	50.69
	ATOM	3178	CG	ARG	1055	52.105	-6.377	40.387	1.00	57.61
	ATOM	3179	CD	ARG	1055	51.635	-5.024	40.913	1.00	61.91
	ATOM	3180	NE	ARG	1055	52.729	-4.130	41.282	1.00	68.12
	ATOM	3181	HE	ARG	1055	53.219	-4.311	42.112	1.00	0.00
30	ATOM	3182	CZ	ARG	1055	53.110	-3.071	40.553	1.00	69.52
	ATOM	3183	NH1	ARG	1055	52.525	-2.744	39.394	1.00	69.57
	ATOM	3184	HH11	ARG	1055	51.767	-3.294	39.044	1.00	0.00
	ATOM	3185	HH12	ARG	1055	52.844	-1.945	38.882	1.00	0.00
	ATOM	3186	NH2	ARG	1055	54.075	-2.287	41.039	1.00	69.36
35	ATOM	3187	HH21	ARG	1055	54.496	-2.495	41.922	1.00	0.00
	ATOM	3188	HH22	ARG	1055	54.380	-1.490	40.518	1.00	0.00
	ATOM	3189	C	ARG	1055	52.273	-7.553	36.837	1.00	39.48
	ATOM	3190	O	ARG	1055	52.702	-6.718	36.031	1.00	35.41
	ATOM	3191	N	PHE	1056	51.277	-8.400	36.577	1.00	35.03

	ATOM	3192	H	PHE	1056	50.896	-8.907	37.325	1.00	0.00
	ATOM	3193	CA	PHE	1056	50.643	-8.531	35.270	1.00	30.23
	ATOM	3194	CB	PHE	1056	49.910	-9.817	35.090	1.00	28.55
	ATOM	3195	CG	PHE	1056	50.728	-11.041	35.334	1.00	24.98
5	ATOM	3196	CD1	PHE	1056	50.515	-11.749	36.513	1.00	25.55
	ATOM	3197	CD2	PHE	1056	51.617	-11.476	34.365	1.00	20.60
	ATOM	3198	CE1	PHE	1056	51.206	-12.935	36.721	1.00	27.31
	ATOM	3199	CE2	PHE	1056	52.305	-12.661	34.579	1.00	25.47
	ATOM	3200	CZ	PHE	1056	52.099	-13.388	35.751	1.00	27.08
10	ATOM	3201	C	PHE	1056	49.584	-7.487	35.083	1.00	26.03
	ATOM	3202	O	PHE	1056	48.861	-7.198	36.038	1.00	28.66
	ATOM	3203	N	HIS	1057	49.427	-6.944	33.888	1.00	23.48
	ATOM	3204	H	HIS	1057	49.959	-7.281	33.131	1.00	0.00
	ATOM	3205	CA	HIS	1057	48.428	-5.900	33.635	1.00	27.72
15	ATOM	3206	CB	HIS	1057	49.127	-4.511	33.499	1.00	27.65
	ATOM	3207	CG	HIS	1057	49.975	-4.158	34.715	1.00	26.44
	ATOM	3208	CD2	HIS	1057	51.296	-4.523	34.820	1.00	26.73
	ATOM	3209	ND1	HIS	1057	49.638	-3.584	35.870	1.00	26.22
	ATOM	3210	HD1	HIS	1057	48.729	-3.352	36.167	1.00	0.00
20	ATOM	3211	CE1	HIS	1057	50.693	-3.611	36.650	1.00	23.17
	ATOM	3212	NE2	HIS	1057	51.689	-4.182	36.017	1.00	22.82
	ATOM	3213	HE2	HIS	1057	52.470	-4.597	36.455	1.00	0.00
	ATOM	3214	C	HIS	1057	47.737	-6.298	32.332	1.00	26.04
	ATOM	3215	O	HIS	1057	48.401	-6.849	31.445	1.00	26.55
25	ATOM	3216	N	HIS	1058	46.422	-6.107	32.193	1.00	23.29
	ATOM	3217	H	HIS	1058	45.925	-5.566	32.839	1.00	0.00
	ATOM	3218	CA	HIS	1058	45.668	-6.592	31.043	1.00	17.86
	ATOM	3219	CB	HIS	1058	44.669	-7.714	31.412	1.00	17.03
	ATOM	3220	CG	HIS	1058	45.393	-8.892	32.027	1.00	12.01
30	ATOM	3221	CD2	HIS	1058	45.577	-9.067	33.378	1.00	14.01
	ATOM	3222	ND1	HIS	1058	46.059	-9.845	31.407	1.00	15.39
	ATOM	3223	HD1	HIS	1058	46.150	-9.979	30.433	1.00	0.00
	ATOM	3224	CE1	HIS	1058	46.656	-10.577	32.308	1.00	18.06
	ATOM	3225	NE2	HIS	1058	46.362	-10.102	33.495	1.00	14.69
35	ATOM	3226	HE2	HIS	1058	46.704	-10.441	34.346	1.00	0.00
	ATOM	3227	C	HIS	1058	44.872	-5.433	30.553	1.00	14.50
	ATOM	3228	O	HIS	1058	44.041	-4.949	31.314	1.00	16.31
	ATOM	3229	N	PHE	1059	45.101	-4.956	29.343	1.00	16.76
	ATOM	3230	H	PHE	1059	45.771	-5.375	28.760	1.00	0.00

	ATOM	3231	CA	PHE	1059	44.326	-3.837	28.839	1.00	19.96
	ATOM	3232	CB	PHE	1059	45.215	-2.681	28.409	1.00	17.38
	ATOM	3233	CG	PHE	1059	46.192	-2.226	29.477	1.00	19.10
	ATOM	3234	CD1	PHE	1059	47.284	-3.039	29.834	1.00	15.32
5	ATOM	3235	CD2	PHE	1059	46.007	-0.976	30.070	1.00	15.59
	ATOM	3236	CE1	PHE	1059	48.194	-2.599	30.785	1.00	13.47
	ATOM	3237	CE2	PHE	1059	46.932	-0.550	31.023	1.00	14.40
	ATOM	3238	CZ	PHE	1059	48.014	-1.354	31.378	1.00	10.86
	ATOM	3239	C	PHE	1059	43.564	-4.334	27.628	1.00	21.22
10	ATOM	3240	O	PHE	1059	44.160	-4.900	26.703	1.00	22.35
	ATOM	3241	N	PRO	1060	42.240	-4.224	27.616	1.00	22.92
	ATOM	3242	CD	PRO	1060	41.428	-3.723	28.719	1.00	22.08
	ATOM	3243	CA	PRO	1060	41.428	-4.568	26.461	1.00	25.16
	ATOM	3244	CB	PRO	1060	39.998	-4.422	26.931	1.00	23.49
15	ATOM	3245	CG	PRO	1060	40.122	-4.448	28.443	1.00	26.03
	ATOM	3246	C	PRO	1060	41.767	-3.632	25.307	1.00	27.91
	ATOM	3247	O	PRO	1060	42.169	-2.482	25.523	1.00	30.97
	ATOM	3248	N	ILE	1061	41.617	-4.135	24.085	1.00	27.10
	ATOM	3249	H	ILE	1061	41.291	-5.059	24.000	1.00	0.00
20	ATOM	3250	CA	ILE	1061	41.815	-3.388	22.860	1.00	22.55
	ATOM	3251	CB	ILE	1061	42.985	-3.990	22.042	1.00	21.40
	ATOM	3252	CG2	ILE	1061	42.986	-3.497	20.593	1.00	19.96
	ATOM	3253	CG1	ILE	1061	44.285	-3.620	22.748	1.00	14.21
	ATOM	3254	CD	ILE	1061	45.456	-4.517	22.333	1.00	12.69
25	ATOM	3255	C	ILE	1061	40.466	-3.649	22.221	1.00	26.54
	ATOM	3256	O	ILE	1061	39.996	-4.775	22.014	1.00	29.17
	ATOM	3257	N	GLU	1062	39.804	-2.541	21.999	1.00	30.58
	ATOM	3258	H	GLU	1062	40.243	-1.681	22.171	1.00	0.00
	ATOM	3259	CA	GLU	1062	38.499	-2.520	21.402	1.00	32.23
30	ATOM	3260	CB	GLU	1062	37.689	-1.410	22.034	1.00	41.61
	ATOM	3261	CG	GLU	1062	37.527	-1.439	23.557	1.00	49.21
	ATOM	3262	CD	GLU	1062	36.164	-1.951	24.011	1.00	58.98
	ATOM	3263	OE1	GLU	1062	35.889	-3.143	23.843	1.00	61.43
	ATOM	3264	OE2	GLU	1062	35.378	-1.148	24.529	1.00	63.31
35	ATOM	3265	C	GLU	1062	38.743	-2.217	19.930	1.00	32.90
	ATOM	3266	O	GLU	1062	39.729	-1.570	19.549	1.00	32.88
	ATOM	3267	N	ARG	1063	37.832	-2.696	19.103	1.00	32.93
	ATOM	3268	H	ARG	1063	37.039	-3.150	19.448	1.00	0.00
	ATOM	3269	CA	ARG	1063	37.857	-2.429	17.687	1.00	35.42

	ATOM	3270	CB	ARG	1063	37.598	-3.727	16.960	1.00	35.48
	ATOM	3271	CG	ARG	1063	37.655	-3.611	15.450	1.00	37.92
	ATOM	3272	CD	ARG	1063	37.188	-4.928	14.870	1.00	38.55
	ATOM	3273	NE	ARG	1063	37.008	-4.830	13.432	1.00	44.21
5	ATOM	3274	HE	ARG	1063	37.719	-5.155	12.841	1.00	0.00
	ATOM	3275	CZ	ARG	1063	35.907	-4.309	12.878	1.00	44.14
	ATOM	3276	NH1	ARG	1063	34.898	-3.837	13.604	1.00	46.11
	ATOM	3277	HH11	ARG	1063	34.940	-3.864	14.601	1.00	0.00
	ATOM	3278	HH12	ARG	1063	34.093	-3.460	13.148	1.00	0.00
10	ATOM	3279	NH2	ARG	1063	35.797	-4.302	11.555	1.00	44.51
	ATOM	3280	HH21	ARG	1063	36.523	-4.696	10.991	1.00	0.00
	ATOM	3281	HH22	ARG	1063	34.977	-3.925	11.124	1.00	0.00
	ATOM	3282	C	ARG	1063	36.713	-1.428	17.503	1.00	38.94
	ATOM	3283	O	ARG	1063	35.627	-1.620	18.073	1.00	38.58
15	ATOM	3284	N	GLN	1064	36.909	-0.313	16.804	1.00	43.24
	ATOM	3285	H	GLN	1064	37.762	-0.182	16.341	1.00	0.00
	ATOM	3286	CA	GLN	1064	35.830	0.639	16.639	1.00	46.48
	ATOM	3287	CB	GLN	1064	36.352	2.068	16.566	1.00	45.17
	ATOM	3288	CG	GLN	1064	36.851	2.699	17.853	1.00	50.93
20	ATOM	3289	CD	GLN	1064	38.196	2.187	18.326	1.00	51.83
	ATOM	3290	OE1	GLN	1064	39.182	2.160	17.590	1.00	56.19
	ATOM	3291	NE2	GLN	1064	38.299	1.777	19.573	1.00	51.87
	ATOM	3292	HE21	GLN	1064	37.505	1.835	20.148	1.00	0.00
	ATOM	3293	HE22	GLN	1064	39.155	1.420	19.872	1.00	0.00
25	ATOM	3294	C	GLN	1064	35.088	0.328	15.353	1.00	51.07
	ATOM	3295	O	GLN	1064	35.558	-0.469	14.524	1.00	52.23
	ATOM	3296	N	LEU	1065	33.918	0.946	15.133	1.00	55.53
	ATOM	3297	H	LEU	1065	33.595	1.616	15.766	1.00	0.00
	ATOM	3298	CA	LEU	1065	33.198	0.759	13.881	1.00	57.02
30	ATOM	3299	CB	LEU	1065	31.724	1.156	13.984	1.00	61.19
	ATOM	3300	CG	LEU	1065	30.663	0.137	13.534	1.00	64.64
	ATOM	3301	CD1	LEU	1065	29.344	0.884	13.414	1.00	67.26
	ATOM	3302	CD2	LEU	1065	30.997	-0.502	12.182	1.00	66.64
	ATOM	3303	C	LEU	1065	33.898	1.707	12.925	1.00	56.04
35	ATOM	3304	O	LEU	1065	33.752	2.930	12.997	1.00	55.83
	ATOM	3305	N	ASN	1066	34.778	1.049	12.172	1.00	54.44
	ATOM	3306	H	ASN	1066	34.903	0.102	12.392	1.00	0.00
	ATOM	3307	CA	ASN	1066	35.648	1.603	11.142	1.00	54.22
	ATOM	3308	CB	ASN	1066	36.216	3.006	11.467	1.00	55.90

	ATOM	3309	CG	ASN	1066	36.994	3.104	12.771	1.00	56.20
	ATOM	3310	OD1	ASN	1066	37.012	2.166	13.563	1.00	58.50
	ATOM	3311	ND2	ASN	1066	37.655	4.203	13.086	1.00	56.65
	ATOM	3312	HD21	ASN	1066	37.613	4.977	12.494	1.00	0.00
5	ATOM	3313	HD22	ASN	1066	38.176	4.166	13.918	1.00	0.00
	ATOM	3314	C	ASN	1066	36.849	0.671	11.002	1.00	53.31
	ATOM	3315	O	ASN	1066	37.506	0.679	9.964	1.00	54.36
	ATOM	3316	N	GLY	1067	37.187	-0.137	12.010	1.00	50.83
	ATOM	3317	H	GLY	1067	36.761	-0.023	12.889	1.00	0.00
10	ATOM	3318	CA	GLY	1067	38.314	-1.048	11.901	1.00	48.53
	ATOM	3319	C	GLY	1067	39.560	-0.517	12.601	1.00	47.35
	ATOM	3320	O	GLY	1067	40.656	-1.066	12.421	1.00	49.79
	ATOM	3321	N	THR	1068	39.470	0.566	13.373	1.00	45.38
	ATOM	3322	H	THR	1068	38.638	1.064	13.499	1.00	0.00
15	ATOM	3323	CA	THR	1068	40.632	0.976	14.124	1.00	43.80
	ATOM	3324	CB	THR	1068	40.595	2.519	14.300	1.00	45.85
	ATOM	3325	OG1	THR	1068	39.344	2.942	14.840	1.00	47.48
	ATOM	3326	HG1	THR	1068	39.235	2.533	15.712	1.00	0.00
	ATOM	3327	CG2	THR	1068	40.883	3.172	12.947	1.00	40.16
20	ATOM	3328	C	THR	1068	40.612	0.199	15.446	1.00	42.99
	ATOM	3329	O	THR	1068	39.592	-0.421	15.800	1.00	43.98
	ATOM	3330	N	TYR	1069	41.743	0.183	16.158	1.00	38.49
	ATOM	3331	H	TYR	1069	42.458	0.791	15.905	1.00	0.00
	ATOM	3332	CA	TYR	1069	41.953	-0.608	17.359	1.00	33.53
25	ATOM	3333	CB	TYR	1069	42.953	-1.740	17.095	1.00	29.74
	ATOM	3334	CG	TYR	1069	42.345	-2.842	16.238	1.00	30.58
	ATOM	3335	CD1	TYR	1069	42.488	-2.831	14.844	1.00	27.87
	ATOM	3336	CE1	TYR	1069	41.922	-3.846	14.074	1.00	27.82
	ATOM	3337	CD2	TYR	1069	41.636	-3.871	16.859	1.00	28.51
30	ATOM	3338	CE2	TYR	1069	41.071	-4.887	16.093	1.00	27.96
	ATOM	3339	CZ	TYR	1069	41.217	-4.864	14.711	1.00	27.78
	ATOM	3340	OH	TYR	1069	40.626	-5.861	13.973	1.00	33.15
	ATOM	3341	HH	TYR	1069	39.963	-6.295	14.520	1.00	0.00
	ATOM	3342	C	TYR	1069	42.520	0.307	18.415	1.00	33.52
35	ATOM	3343	O	TYR	1069	43.558	0.946	18.210	1.00	33.82
	ATOM	3344	N	ALA	1070	41.900	0.347	19.580	1.00	32.06
	ATOM	3345	H	ALA	1070	41.151	-0.261	19.769	1.00	0.00
	ATOM	3346	CA	ALA	1070	42.324	1.263	20.603	1.00	28.04
	ATOM	3347	CB	ALA	1070	41.605	2.580	20.437	1.00	26.29

	ATOM	3348	C	ALA	1070	41.992	0.722	21.976	1.00	27.69
	ATOM	3349	O	ALA	1070	40.919	0.153	22.184	1.00	29.45
	ATOM	3350	N	ILE	1071	42.935	0.860	22.905	1.00	26.64
	ATOM	3351	H	ILE	1071	43.779	1.277	22.641	1.00	0.00
5	ATOM	3352	CA	ILE	1071	42.709	0.579	24.313	1.00	27.04
	ATOM	3353	CB	ILE	1071	44.032	0.635	25.117	1.00	25.62
	ATOM	3354	CG2	ILE	1071	43.730	0.441	26.608	1.00	25.21
	ATOM	3355	CG1	ILE	1071	45.003	-0.438	24.603	1.00	26.34
	ATOM	3356	CD	ILE	1071	46.364	-0.464	25.318	1.00	23.97
10	ATOM	3357	C	ILE	1071	41.806	1.739	24.694	1.00	31.25
	ATOM	3358	O	ILE	1071	42.087	2.874	24.292	1.00	35.46
	ATOM	3359	N	ALA	1072	40.711	1.527	25.413	1.00	38.50
	ATOM	3360	H	ALA	1072	40.567	0.631	25.776	1.00	0.00
	ATOM	3361	CA	ALA	1072	39.775	2.603	25.750	1.00	43.90
15	ATOM	3362	CB	ALA	1072	38.653	2.053	26.636	1.00	44.68
	ATOM	3363	C	ALA	1072	40.407	3.805	26.464	1.00	45.61
	ATOM	3364	O	ALA	1072	41.009	3.680	27.536	1.00	45.17
	ATOM	3365	N	GLY	1073	40.290	4.959	25.796	1.00	46.20
	ATOM	3366	H	GLY	1073	39.880	4.931	24.912	1.00	0.00
20	ATOM	3367	CA	GLY	1073	40.820	6.231	26.267	1.00	44.42
	ATOM	3368	C	GLY	1073	42.222	6.531	25.730	1.00	43.18
	ATOM	3369	O	GLY	1073	42.806	7.578	26.027	1.00	46.40
	ATOM	3370	N	GLY	1074	42.812	5.634	24.947	1.00	39.43
	ATOM	3371	H	GLY	1074	42.335	4.822	24.678	1.00	0.00
25	ATOM	3372	CA	GLY	1074	44.139	5.851	24.424	1.00	34.46
	ATOM	3373	C	GLY	1074	44.037	6.104	22.947	1.00	34.61
	ATOM	3374	O	GLY	1074	42.964	6.354	22.378	1.00	36.50
	ATOM	3375	N	LYS	1075	45.187	5.951	22.314	1.00	37.26
	ATOM	3376	H	LYS	1075	45.948	5.572	22.802	1.00	0.00
30	ATOM	3377	CA	LYS	1075	45.300	6.215	20.896	1.00	39.16
	ATOM	3378	CB	LYS	1075	46.760	6.409	20.566	1.00	42.86
	ATOM	3379	CG	LYS	1075	47.012	7.475	19.510	1.00	45.51
	ATOM	3380	CD	LYS	1075	48.403	8.077	19.775	1.00	51.14
	ATOM	3381	CE	LYS	1075	48.647	8.663	21.198	1.00	48.74
35	ATOM	3382	NZ	LYS	1075	47.819	9.817	21.511	1.00	46.00
	ATOM	3383	HZ1	LYS	1075	46.818	9.539	21.522	1.00	0.00
	ATOM	3384	HZ2	LYS	1075	47.969	10.554	20.793	1.00	0.00
	ATOM	3385	HZ3	LYS	1075	48.087	10.187	22.444	1.00	0.00
	ATOM	3386	C	LYS	1075	44.719	5.125	20.005	1.00	40.24

	ATOM	3387	O	LYS	1075	44.968	3.916	20.185	1.00	37.79
	ATOM	3388	N	ALA	1076	43.983	5.616	19.003	1.00	40.40
	ATOM	3389	H	ALA	1076	43.867	6.585	18.930	1.00	0.00
	ATOM	3390	CA	ALA	1076	43.411	4.772	17.969	1.00	39.60
5	ATOM	3391	CB	ALA	1076	42.390	5.517	17.112	1.00	40.11
	ATOM	3392	C	ALA	1076	44.577	4.383	17.084	1.00	38.92
	ATOM	3393	O	ALA	1076	45.597	5.070	16.985	1.00	40.33
	ATOM	3394	N	HIS	1077	44.485	3.196	16.522	1.00	39.15
	ATOM	3395	H	HIS	1077	43.653	2.682	16.622	1.00	0.00
10	ATOM	3396	CA	HIS	1077	45.516	2.622	15.693	1.00	41.38
	ATOM	3397	CB	HIS	1077	46.386	1.682	16.493	1.00	38.84
	ATOM	3398	CG	HIS	1077	47.188	2.367	17.574	1.00	37.80
	ATOM	3399	CD2	HIS	1077	48.402	2.946	17.353	1.00	37.54
	ATOM	3400	ND1	HIS	1077	46.898	2.502	18.866	1.00	41.89
15	ATOM	3401	HD1	HIS	1077	46.011	2.402	19.292	1.00	0.00
	ATOM	3402	CE1	HIS	1077	47.889	3.129	19.438	1.00	40.69
	ATOM	3403	NE2	HIS	1077	48.786	3.391	18.517	1.00	42.21
	ATOM	3404	HE2	HIS	1077	49.577	3.946	18.657	1.00	0.00
	ATOM	3405	C	HIS	1077	44.771	1.821	14.644	1.00	44.66
20	ATOM	3406	O	HIS	1077	43.544	1.699	14.698	1.00	43.75
	ATOM	3407	N	CYS	1078	45.467	1.272	13.664	1.00	49.78
	ATOM	3408	H	CYS	1078	46.439	1.382	13.603	1.00	0.00
	ATOM	3409	CA	CYS	1078	44.853	0.414	12.666	1.00	54.24
	ATOM	3410	CB	CYS	1078	45.069	0.998	11.256	1.00	58.19
25	ATOM	3411	SG	CYS	1078	44.397	2.671	11.011	1.00	71.36
	ATOM	3412	C	CYS	1078	45.693	-0.832	12.890	1.00	51.82
	ATOM	3413	O	CYS	1078	46.927	-0.752	12.852	1.00	55.71
	ATOM	3414	N	GLY	1079	45.083	-1.969	13.190	1.00	47.69
	ATOM	3415	H	GLY	1079	44.104	-1.984	13.206	1.00	0.00
30	ATOM	3416	CA	GLY	1079	45.849	-3.185	13.436	1.00	43.67
	ATOM	3417	C	GLY	1079	46.508	-3.249	14.823	1.00	40.20
	ATOM	3418	O	GLY	1079	47.123	-2.286	15.309	1.00	40.36
	ATOM	3419	N	PRO	1080	46.431	-4.401	15.503	1.00	37.25
	ATOM	3420	CD	PRO	1080	45.738	-5.599	15.044	1.00	36.81
35	ATOM	3421	CA	PRO	1080	47.049	-4.627	16.812	1.00	34.51
	ATOM	3422	CB	PRO	1080	46.520	-5.965	17.245	1.00	35.28
	ATOM	3423	CG	PRO	1080	46.349	-6.680	15.921	1.00	37.15
	ATOM	3424	C	PRO	1080	48.559	-4.583	16.707	1.00	31.54
	ATOM	3425	O	PRO	1080	49.245	-4.177	17.651	1.00	31.30

	ATOM	3426	N	ALA	1081	49.084	-4.958	15.528	1.00	30.26
	ATOM	3427	H	ALA	1081	48.480	-5.268	14.829	1.00	0.00
	ATOM	3428	CA	ALA	1081	50.515	-4.940	15.256	1.00	30.04
	ATOM	3429	CB	ALA	1081	50.778	-5.435	13.827	1.00	29.58
5	ATOM	3430	C	ALA	1081	51.109	-3.545	15.416	1.00	30.25
	ATOM	3431	O	ALA	1081	52.098	-3.360	16.136	1.00	31.27
	ATOM	3432	N	GLU	1082	50.462	-2.534	14.822	1.00	32.52
	ATOM	3433	H	GLU	1082	49.612	-2.707	14.365	1.00	0.00
	ATOM	3434	CA	GLU	1082	50.923	-1.146	14.906	1.00	31.86
10	ATOM	3435	CB	GLU	1082	50.117	-0.257	13.961	1.00	33.49
	ATOM	3436	CG	GLU	1082	50.445	-0.415	12.480	1.00	34.68
	ATOM	3437	CD	GLU	1082	50.414	-1.848	11.968	1.00	38.35
	ATOM	3438	OE1	GLU	1082	49.335	-2.445	11.933	1.00	38.71
	ATOM	3439	OE2	GLU	1082	51.485	-2.364	11.638	1.00	41.55
15	ATOM	3440	C	GLU	1082	50.755	-0.649	16.328	1.00	29.07
	ATOM	3441	O	GLU	1082	51.671	-0.026	16.874	1.00	28.55
	ATOM	3442	N	LEU	1083	49.605	-0.991	16.942	1.00	27.23
	ATOM	3443	H	LEU	1083	48.939	-1.519	16.448	1.00	0.00
	ATOM	3444	CA	LEU	1083	49.329	-0.592	18.309	1.00	26.74
20	ATOM	3445	CB	LEU	1083	48.008	-1.212	18.799	1.00	25.43
	ATOM	3446	CG	LEU	1083	47.531	-0.830	20.215	1.00	21.57
	ATOM	3447	CD1	LEU	1083	46.038	-0.643	20.202	1.00	20.84
	ATOM	3448	CD2	LEU	1083	47.943	-1.898	21.226	1.00	19.23
	ATOM	3449	C	LEU	1083	50.466	-0.996	19.227	1.00	29.37
25	ATOM	3450	O	LEU	1083	50.966	-0.135	19.966	1.00	31.06
	ATOM	3451	N	CYS	1084	50.930	-2.252	19.124	1.00	32.62
	ATOM	3452	H	CYS	1084	50.514	-2.867	18.482	1.00	0.00
	ATOM	3453	CA	CYS	1084	51.988	-2.721	20.002	1.00	31.81
	ATOM	3454	CB	CYS	1084	52.242	-4.221	19.865	1.00	31.52
30	ATOM	3455	SG	CYS	1084	50.901	-5.192	20.592	1.00	29.87
	ATOM	3456	C	CYS	1084	53.283	-2.018	19.722	1.00	31.85
	ATOM	3457	O	CYS	1084	53.989	-1.702	20.679	1.00	31.54
	ATOM	3458	N	GLU	1085	53.588	-1.719	18.447	1.00	33.95
	ATOM	3459	H	GLU	1085	52.937	-1.899	17.737	1.00	0.00
35	ATOM	3460	CA	GLU	1085	54.856	-1.083	18.105	1.00	35.05
	ATOM	3461	CB	GLU	1085	55.035	-0.981	16.595	1.00	40.13
	ATOM	3462	CG	GLU	1085	56.513	-1.026	16.217	1.00	49.97
	ATOM	3463	CD	GLU	1085	56.801	-0.768	14.736	1.00	60.29
	ATOM	3464	OE1	GLU	1085	57.850	-0.176	14.444	1.00	68.30

	ATOM	3465	OE2	GLU	1085	55.991	-1.138	13.874	1.00	62.08
	ATOM	3466	C	GLU	1085	54.869	0.306	18.701	1.00	32.52
	ATOM	3467	O	GLU	1085	55.861	0.678	19.333	1.00	33.29
	ATOM	3468	N	PHE	1086	53.721	1.005	18.599	1.00	31.71
5	ATOM	3469	H	PHE	1086	52.970	0.583	18.135	1.00	0.00
	ATOM	3470	CA	PHE	1086	53.545	2.341	19.136	1.00	31.07
	ATOM	3471	CB	PHE	1086	52.090	2.777	18.895	1.00	29.64
	ATOM	3472	CG	PHE	1086	51.772	4.100	19.578	1.00	34.51
	ATOM	3473	CD1	PHE	1086	52.277	5.298	19.057	1.00	38.20
10	ATOM	3474	CD2	PHE	1086	51.030	4.112	20.770	1.00	37.01
	ATOM	3475	CE1	PHE	1086	52.045	6.494	19.739	1.00	37.34
	ATOM	3476	CE2	PHE	1086	50.798	5.308	21.451	1.00	33.21
	ATOM	3477	CZ	PHE	1086	51.308	6.495	20.934	1.00	39.15
	ATOM	3478	C	PHE	1086	53.901	2.373	20.627	1.00	32.70
15	ATOM	3479	O	PHE	1086	54.661	3.239	21.084	1.00	36.52
	ATOM	3480	N	TYR	1087	53.396	1.415	21.399	1.00	32.45
	ATOM	3481	H	TYR	1087	52.828	0.726	20.994	1.00	0.00
	ATOM	3482	CA	TYR	1087	53.662	1.372	22.824	1.00	28.99
	ATOM	3483	CB	TYR	1087	52.527	0.572	23.476	1.00	29.23
20	ATOM	3484	CG	TYR	1087	51.192	1.346	23.507	1.00	28.38
	ATOM	3485	CD1	TYR	1087	50.221	1.141	22.520	1.00	28.31
	ATOM	3486	CE1	TYR	1087	49.005	1.835	22.550	1.00	26.26
	ATOM	3487	CD2	TYR	1087	50.924	2.266	24.538	1.00	29.02
	ATOM	3488	CE2	TYR	1087	49.703	2.963	24.572	1.00	24.57
25	ATOM	3489	CZ	TYR	1087	48.746	2.744	23.580	1.00	26.40
	ATOM	3490	OH	TYR	1087	47.531	3.426	23.619	1.00	26.78
	ATOM	3491	HH	TYR	1087	47.453	3.794	24.512	1.00	0.00
	ATOM	3492	C	TYR	1087	55.036	0.814	23.165	1.00	30.34
	ATOM	3493	O	TYR	1087	55.537	0.983	24.290	1.00	30.02
30	ATOM	3494	N	SER	1088	55.716	0.129	22.241	1.00	33.87
	ATOM	3495	H	SER	1088	55.266	-0.198	21.430	1.00	0.00
	ATOM	3496	CA	SER	1088	57.099	-0.270	22.439	1.00	37.71
	ATOM	3497	CB	SER	1088	57.538	-1.150	21.271	1.00	40.54
	ATOM	3498	OG	SER	1088	56.747	-2.337	21.159	1.00	40.91
35	ATOM	3499	HG	SER	1088	57.236	-3.023	21.637	1.00	0.00
	ATOM	3500	C	SER	1088	57.985	0.978	22.531	1.00	41.25
	ATOM	3501	O	SER	1088	59.047	0.995	23.183	1.00	38.81
	ATOM	3502	N	ARG	1089	57.570	2.047	21.843	1.00	44.94
	ATOM	3503	H	ARG	1089	56.773	1.973	21.274	1.00	0.00

	ATOM	3504	CA	ARG	1089	58.272	3.314	21.934	1.00	48.42
	ATOM	3505	CB	ARG	1089	58.161	4.166	20.656	1.00	49.53
	ATOM	3506	CG	ARG	1089	58.895	3.689	19.410	1.00	47.71
	ATOM	3507	CD	ARG	1089	58.041	2.725	18.614	1.00	48.46
5	ATOM	3508	NE	ARG	1089	56.856	3.372	18.072	1.00	51.23
	ATOM	3509	HE	ARG	1089	56.280	3.894	18.668	1.00	0.00
	ATOM	3510	CZ	ARG	1089	56.517	3.268	16.778	1.00	54.05
	ATOM	3511	NH1	ARG	1089	57.265	2.560	15.912	1.00	52.77
	ATOM	3512	HH11	ARG	1089	58.098	2.101	16.219	1.00	0.00
10	ATOM	3513	HH12	ARG	1089	56.995	2.514	14.951	1.00	0.00
	ATOM	3514	NH2	ARG	1089	55.391	3.865	16.355	1.00	50.10
	ATOM	3515	HH21	ARG	1089	54.825	4.373	17.002	1.00	0.00
	ATOM	3516	HH22	ARG	1089	55.130	3.814	15.391	1.00	0.00
	ATOM	3517	C	ARG	1089	57.655	4.107	23.072	1.00	48.92
15	ATOM	3518	O	ARG	1089	58.270	4.220	24.138	1.00	49.60
	ATOM	3519	N	ASP	1090	56.422	4.580	22.877	1.00	50.51
	ATOM	3520	H	ASP	1090	55.905	4.297	22.092	1.00	0.00
	ATOM	3521	CA	ASP	1090	55.753	5.447	23.834	1.00	55.15
	ATOM	3522	CB	ASP	1090	55.177	6.659	23.071	1.00	56.05
20	ATOM	3523	CG	ASP	1090	54.281	7.584	23.889	1.00	55.59
	ATOM	3524	OD1	ASP	1090	53.104	7.678	23.550	1.00	57.02
	ATOM	3525	OD2	ASP	1090	54.748	8.189	24.854	1.00	57.74
	ATOM	3526	C	ASP	1090	54.653	4.774	24.659	1.00	55.94
	ATOM	3527	O	ASP	1090	53.592	4.432	24.115	1.00	55.42
25	ATOM	3528	N	PRO	1091	54.835	4.624	25.984	1.00	55.78
	ATOM	3529	CD	PRO	1091	56.135	4.706	26.655	1.00	55.19
	ATOM	3530	CA	PRO	1091	53.801	4.154	26.897	1.00	55.95
	ATOM	3531	CB	PRO	1091	54.598	3.706	28.114	1.00	56.04
	ATOM	3532	CG	PRO	1091	55.792	4.624	28.138	1.00	55.88
30	ATOM	3533	C	PRO	1091	52.688	5.146	27.220	1.00	56.97
	ATOM	3534	O	PRO	1091	52.486	5.489	28.389	1.00	57.39
	ATOM	3535	N	ASP	1092	51.933	5.654	26.238	1.00	58.63
	ATOM	3536	H	ASP	1092	52.090	5.339	25.318	1.00	0.00
	ATOM	3537	CA	ASP	1092	50.820	6.556	26.519	1.00	58.70
35	ATOM	3538	CB	ASP	1092	50.155	7.027	25.210	1.00	63.88
	ATOM	3539	CG	ASP	1092	48.815	7.764	25.350	1.00	70.81
	ATOM	3540	OD1	ASP	1092	47.831	7.289	24.774	1.00	74.91
	ATOM	3541	OD2	ASP	1092	48.747	8.794	26.029	1.00	70.73
	ATOM	3542	C	ASP	1092	49.792	5.826	27.385	1.00	57.19

	ATOM	3543	O	ASP	1092	48.978	5.011	26.942	1.00	56.76
	ATOM	3544	N	GLY	1093	49.932	6.112	28.666	1.00	55.12
	ATOM	3545	H	GLY	1093	50.717	6.617	28.959	1.00	0.00
	ATOM	3546	CA	GLY	1093	49.040	5.583	29.665	1.00	53.01
5	ATOM	3547	C	GLY	1093	49.403	4.161	30.026	1.00	48.92
	ATOM	3548	O	GLY	1093	48.533	3.358	30.361	1.00	52.72
	ATOM	3549	N	LEU	1094	50.665	3.777	29.993	1.00	45.02
	ATOM	3550	H	LEU	1094	51.386	4.424	29.840	1.00	0.00
	ATOM	3551	CA	LEU	1094	50.984	2.413	30.331	1.00	40.34
10	ATOM	3552	CB	LEU	1094	51.649	1.749	29.132	1.00	38.94
	ATOM	3553	CG	LEU	1094	50.921	0.611	28.409	1.00	36.60
	ATOM	3554	CD1	LEU	1094	49.570	1.068	27.871	1.00	31.39
	ATOM	3555	CD2	LEU	1094	51.824	0.120	27.283	1.00	37.39
	ATOM	3556	C	LEU	1094	51.880	2.366	31.555	1.00	39.95
15	ATOM	3557	O	LEU	1094	52.543	3.351	31.881	1.00	39.55
	ATOM	3558	N	PRO	1095	51.866	1.249	32.290	1.00	40.07
	ATOM	3559	CD	PRO	1095	50.737	0.328	32.367	1.00	42.05
	ATOM	3560	CA	PRO	1095	52.888	0.848	33.241	1.00	41.65
	ATOM	3561	CB	PRO	1095	52.491	-0.578	33.571	1.00	41.38
20	ATOM	3562	CG	PRO	1095	50.991	-0.476	33.630	1.00	41.02
	ATOM	3563	C	PRO	1095	54.342	0.990	32.799	1.00	42.06
	ATOM	3564	O	PRO	1095	55.202	1.307	33.630	1.00	45.34
	ATOM	3565	N	CYS	1096	54.666	0.605	31.565	1.00	40.67
	ATOM	3566	H	CYS	1096	53.997	0.185	30.981	1.00	0.00
25	ATOM	3567	CA	CYS	1096	55.982	0.797	30.961	1.00	38.40
	ATOM	3568	CB	CYS	1096	57.041	-0.184	31.463	1.00	39.77
	ATOM	3569	SG	CYS	1096	56.640	-1.942	31.408	1.00	39.49
	ATOM	3570	C	CYS	1096	55.800	0.558	29.486	1.00	37.14
	ATOM	3571	O	CYS	1096	54.686	0.204	29.075	1.00	36.74
30	ATOM	3572	N	ASN	1097	56.824	0.800	28.670	1.00	37.32
	ATOM	3573	H	ASN	1097	57.719	0.997	29.013	1.00	0.00
	ATOM	3574	CA	ASN	1097	56.696	0.535	27.245	1.00	36.40
	ATOM	3575	CB	ASN	1097	57.775	1.260	26.443	1.00	33.25
	ATOM	3576	CG	ASN	1097	59.179	0.822	26.788	1.00	32.16
35	ATOM	3577	OD1	ASN	1097	59.559	0.769	27.957	1.00	34.46
	ATOM	3578	ND2	ASN	1097	59.996	0.486	25.810	1.00	35.25
	ATOM	3579	HD21	ASN	1097	59.662	0.517	24.892	1.00	0.00
	ATOM	3580	HD22	ASN	1097	60.893	0.203	26.064	1.00	0.00
	ATOM	3581	C	ASN	1097	56.843	-0.968	27.051	1.00	38.24

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	ATOM	3582	O	ASN	1097	57.278	-1.726	27.938	1.00	40.46
	ATOM	3583	N	LEU	1098	56.431	-1.443	25.886	1.00	35.38
	ATOM	3584	H	LEU	1098	56.119	-0.821	25.196	1.00	0.00
	ATOM	3585	CA	LEU	1098	56.504	-2.861	25.619	1.00	30.02
5	ATOM	3586	CB	LEU	1098	55.537	-3.194	24.494	1.00	29.07
	ATOM	3587	CG	LEU	1098	54.094	-2.729	24.669	1.00	26.84
	ATOM	3588	CD1	LEU	1098	53.306	-3.185	23.475	1.00	27.25
	ATOM	3589	CD2	LEU	1098	53.496	-3.273	25.960	1.00	31.57
	ATOM	3590	C	LEU	1098	57.941	-3.103	25.237	1.00	29.99
10	ATOM	3591	O	LEU	1098	58.515	-2.385	24.418	1.00	30.27
	ATOM	3592	N	ARG	1099	58.565	-4.056	25.901	1.00	32.01
	ATOM	3593	H	ARG	1099	58.053	-4.563	26.551	1.00	0.00
	ATOM	3594	CA	ARG	1099	59.951	-4.369	25.656	1.00	33.13
	ATOM	3595	CB	ARG	1099	60.768	-4.250	26.964	1.00	33.84
15	ATOM	3596	CG	ARG	1099	60.776	-2.845	27.586	1.00	37.15
	ATOM	3597	CD	ARG	1099	61.588	-2.775	28.889	1.00	42.03
	ATOM	3598	NE	ARG	1099	61.307	-1.550	29.650	1.00	45.59
	ATOM	3599	HE	ARG	1099	60.933	-0.777	29.176	1.00	0.00
	ATOM	3600	CZ	ARG	1099	61.545	-1.435	30.972	1.00	44.75
20	ATOM	3601	NH1	ARG	1099	62.068	-2.432	31.691	1.00	47.19
	ATOM	3602	HH11	ARG	1099	62.294	-3.306	31.262	1.00	0.00
	ATOM	3603	HH12	ARG	1099	62.221	-2.304	32.670	1.00	0.00
	ATOM	3604	NH2	ARG	1099	61.216	-0.312	31.612	1.00	41.73
	ATOM	3605	HH21	ARG	1099	60.796	0.443	31.108	1.00	0.00
25	ATOM	3606	HH22	ARG	1099	61.379	-0.226	32.594	1.00	0.00
	ATOM	3607	C	ARG	1099	60.063	-5.778	25.093	1.00	35.07
	ATOM	3608	O	ARG	1099	60.240	-5.942	23.881	1.00	35.29
	ATOM	3609	N	LYS	1100	59.891	-6.841	25.868	1.00	34.71
	ATOM	3610	H	LYS	1100	59.427	-6.750	26.727	1.00	0.00
30	ATOM	3611	CA	LYS	1100	60.158	-8.157	25.324	1.00	37.09
	ATOM	3612	CB	LYS	1100	60.795	-9.008	26.411	1.00	42.93
	ATOM	3613	CG	LYS	1100	61.296	-10.344	25.868	1.00	53.06
	ATOM	3614	CD	LYS	1100	61.978	-11.153	26.969	1.00	57.15
	ATOM	3615	CE	LYS	1100	62.305	-12.569	26.488	1.00	61.71
35	ATOM	3616	NZ	LYS	1100	61.103	-13.374	26.322	1.00	65.62
	ATOM	3617	HZ1	LYS	1100	60.468	-12.912	25.642	1.00	0.00
	ATOM	3618	HZ2	LYS	1100	60.623	-13.472	27.240	1.00	0.00
	ATOM	3619	HZ3	LYS	1100	61.370	-14.316	25.969	1.00	0.00
	ATOM	3620	C	LYS	1100	58.848	-8.765	24.833	1.00	37.79

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	ATOM	3621	O	LYS	1100	57.914	-8.899	25.637	1.00	39.77
	ATOM	3622	N	PRO	1101	58.672	-9.097	23.543	1.00	34.56
	ATOM	3623	CD	PRO	1101	59.557	-8.728	22.448	1.00	32.70
	ATOM	3624	CA	PRO	1101	57.514	-9.832	23.050	1.00	33.16
5	ATOM	3625	CB	PRO	1101	57.701	-9.840	21.556	1.00	34.82
	ATOM	3626	CG	PRO	1101	58.594	-8.657	21.285	1.00	34.87
	ATOM	3627	C	PRO	1101	57.539	-11.213	23.683	1.00	30.83
	ATOM	3628	O	PRO	1101	58.573	-11.890	23.614	1.00	33.53
	ATOM	3629	N	CYS	1102	56.480	-11.707	24.317	1.00	29.51
10	ATOM	3630	H	CYS	1102	55.634	-11.216	24.333	1.00	0.00
	ATOM	3631	CA	CYS	1102	56.534	-13.050	24.891	1.00	27.74
	ATOM	3632	CB	CYS	1102	55.525	-13.239	26.041	1.00	24.93
	ATOM	3633	SG	CYS	1102	55.550	-14.875	26.838	1.00	25.54
	ATOM	3634	C	CYS	1102	56.120	-13.868	23.679	1.00	28.20
15	ATOM	3635	O	CYS	1102	54.939	-14.057	23.356	1.00	24.55
	ATOM	3636	N	ASN	1103	57.153	-14.223	22.921	1.00	25.01
	ATOM	3637	H	ASN	1103	58.060	-13.985	23.213	1.00	0.00
	ATOM	3638	CA	ASN	1103	56.945	-14.999	21.730	1.00	27.34
	ATOM	3639	CB	ASN	1103	58.160	-14.805	20.822	1.00	25.34
20	ATOM	3640	CG	ASN	1103	58.030	-13.536	19.974	1.00	24.69
	ATOM	3641	OD1	ASN	1103	58.871	-13.209	19.144	1.00	31.34
	ATOM	3642	ND2	ASN	1103	57.000	-12.709	20.053	1.00	27.90
	ATOM	3643	HD21	ASN	1103	56.232	-12.920	20.617	1.00	0.00
	ATOM	3644	HD22	ASN	1103	57.117	-11.875	19.552	1.00	0.00
25	ATOM	3645	C	ASN	1103	56.668	-16.460	22.044	1.00	27.74
	ATOM	3646	O	ASN	1103	57.148	-17.042	23.027	1.00	27.94
	ATOM	3647	N	ARG	1104	55.745	-16.955	21.217	1.00	26.87
	ATOM	3648	H	ARG	1104	55.445	-16.404	20.468	1.00	0.00
	ATOM	3649	CA	ARG	1104	55.177	-18.280	21.333	1.00	26.33
30	ATOM	3650	CB	ARG	1104	54.266	-18.536	20.161	1.00	24.23
	ATOM	3651	CG	ARG	1104	52.888	-18.950	20.569	1.00	25.72
	ATOM	3652	CD	ARG	1104	51.989	-19.095	19.367	1.00	24.23
	ATOM	3653	NE	ARG	1104	51.863	-17.832	18.700	1.00	24.12
	ATOM	3654	HE	ARG	1104	51.489	-17.084	19.203	1.00	0.00
35	ATOM	3655	CZ	ARG	1104	52.257	-17.629	17.447	1.00	24.35
	ATOM	3656	NH1	ARG	1104	52.803	-18.572	16.669	1.00	22.87
	ATOM	3657	HH11	ARG	1104	52.937	-19.496	17.023	1.00	0.00
	ATOM	3658	HH12	ARG	1104	53.075	-18.349	15.734	1.00	0.00
	ATOM	3659	NH2	ARG	1104	52.098	-16.401	16.999	1.00	26.96

	ATOM	3660	HH21	ARG	1104	51.687	-15.710	17.595	1.00	0.00
	ATOM	3661	HH22	ARG	1104	52.368	-16.154	16.074	1.00	0.00
	ATOM	3662	C	ARG	1104	56.248	-19.341	21.367	1.00	25.95
	ATOM	3663	O	ARG	1104	57.056	-19.403	20.438	1.00	25.69
5	ATOM	3664	N	PRO	1105	56.321	-20.176	22.403	1.00	26.74
	ATOM	3665	CD	PRO	1105	55.548	-20.058	23.635	1.00	29.26
	ATOM	3666	CA	PRO	1105	57.209	-21.331	22.426	1.00	32.94
	ATOM	3667	CB	PRO	1105	56.899	-21.986	23.770	1.00	28.93
	ATOM	3668	CG	PRO	1105	55.515	-21.495	24.134	1.00	30.42
10	ATOM	3669	C	PRO	1105	56.960	-22.209	21.197	1.00	38.12
	ATOM	3670	O	PRO	1105	55.865	-22.738	21.004	1.00	38.58
	ATOM	3671	N	SER	1106	57.945	-22.269	20.306	1.00	43.86
	ATOM	3672	H	SER	1106	58.734	-21.704	20.434	1.00	0.00
	ATOM	3673	CA	SER	1106	57.886	-23.014	19.058	1.00	49.42
15	ATOM	3674	CB	SER	1106	59.331	-23.177	18.574	1.00	51.93
	ATOM	3675	OG	SER	1106	59.964	-21.896	18.565	1.00	55.67
	ATOM	3676	HG	SER	1106	60.814	-21.945	18.119	1.00	0.00
	ATOM	3677	C	SER	1106	57.161	-24.356	19.157	1.00	49.17
	ATOM	3678	O	SER	1106	57.443	-25.230	19.979	1.00	51.15
20	ATOM	3679	N	GLY	1107	56.127	-24.464	18.336	1.00	47.64
	ATOM	3680	H	GLY	1107	55.849	-23.683	17.814	1.00	0.00
	ATOM	3681	CA	GLY	1107	55.285	-25.640	18.361	1.00	43.01
	ATOM	3682	C	GLY	1107	53.901	-25.219	18.826	1.00	39.30
	ATOM	3683	O	GLY	1107	52.903	-25.817	18.411	1.00	42.80
25	ATOM	3684	N	LEU	1108	53.845	-24.188	19.667	1.00	30.41
	ATOM	3685	H	LEU	1108	54.668	-23.763	19.977	1.00	0.00
	ATOM	3686	CA	LEU	1108	52.603	-23.628	20.133	1.00	24.96
	ATOM	3687	CB	LEU	1108	52.839	-22.863	21.434	1.00	25.86
	ATOM	3688	CG	LEU	1108	51.627	-22.255	22.107	1.00	26.69
30	ATOM	3689	CD1	LEU	1108	50.821	-23.356	22.737	1.00	30.10
	ATOM	3690	CD2	LEU	1108	52.036	-21.299	23.185	1.00	29.77
	ATOM	3691	C	LEU	1108	52.108	-22.688	19.037	1.00	19.07
	ATOM	3692	O	LEU	1108	52.868	-21.897	18.471	1.00	19.17
	ATOM	3693	N	GLU	1109	50.829	-22.822	18.731	1.00	11.01
35	ATOM	3694	H	GLU	1109	50.292	-23.421	19.287	1.00	0.00
	ATOM	3695	CA	GLU	1109	50.141	-22.052	17.715	1.00	13.68
	ATOM	3696	CB	GLU	1109	49.349	-22.970	16.765	1.00	15.71
	ATOM	3697	CG	GLU	1109	50.244	-23.684	15.754	1.00	3.36
	ATOM	3698	CD	GLU	1109	50.907	-22.718	14.771	1.00	14.34

	ATOM	3699	OE1	GLU	1109	52.127	-22.779	14.666	1.00	14.12
	ATOM	3700	OE2	GLU	1109	50.226	-21.925	14.101	1.00	18.46
	ATOM	3701	C	GLU	1109	49.168	-21.137	18.425	1.00	15.87
	ATOM	3702	O	GLU	1109	48.936	-21.367	19.623	1.00	17.90
5	ATOM	3703	N	PRO	1110	48.573	-20.099	17.794	1.00	12.87
	ATOM	3704	CD	PRO	1110	49.101	-19.362	16.640	1.00	9.54
	ATOM	3705	CA	PRO	1110	47.375	-19.456	18.309	1.00	10.18
	ATOM	3706	CB	PRO	1110	47.003	-18.460	17.242	1.00	11.89
	ATOM	3707	CG	PRO	1110	48.342	-18.025	16.680	1.00	12.40
10	ATOM	3708	C	PRO	1110	46.311	-20.503	18.583	1.00	13.76
	ATOM	3709	O	PRO	1110	46.240	-21.529	17.895	1.00	18.10
	ATOM	3710	N	GLN	1111	45.539	-20.283	19.648	1.00	14.71
	ATOM	3711	H	GLN	1111	45.659	-19.457	20.161	1.00	0.00
	ATOM	3712	CA	GLN	1111	44.477	-21.190	20.058	1.00	17.01
15	ATOM	3713	CB	GLN	1111	44.351	-21.103	21.584	1.00	18.38
	ATOM	3714	CG	GLN	1111	43.385	-22.049	22.286	1.00	23.45
	ATOM	3715	CD	GLN	1111	43.676	-23.532	22.089	1.00	28.59
	ATOM	3716	OE1	GLN	1111	42.757	-24.348	21.959	1.00	29.01
	ATOM	3717	NE2	GLN	1111	44.929	-23.965	22.030	1.00	27.57
20	ATOM	3718	HE21	GLN	1111	45.691	-23.340	22.074	1.00	0.00
	ATOM	3719	HE22	GLN	1111	45.064	-24.928	21.948	1.00	0.00
	ATOM	3720	C	GLN	1111	43.206	-20.728	19.348	1.00	20.44
	ATOM	3721	O	GLN	1111	42.856	-19.555	19.522	1.00	21.59
	ATOM	3722	N	PRO	1112	42.514	-21.525	18.509	1.00	23.22
25	ATOM	3723	CD	PRO	1112	42.844	-22.911	18.181	1.00	23.13
	ATOM	3724	CA	PRO	1112	41.305	-21.123	17.811	1.00	20.52
	ATOM	3725	CB	PRO	1112	40.998	-22.286	16.909	1.00	22.54
	ATOM	3726	CG	PRO	1112	41.526	-23.474	17.670	1.00	23.92
	ATOM	3727	C	PRO	1112	40.213	-20.825	18.815	1.00	24.15
30	ATOM	3728	O	PRO	1112	40.200	-21.368	19.930	1.00	30.52
	ATOM	3729	N	GLY	1113	39.267	-19.977	18.447	1.00	23.10
	ATOM	3730	H	GLY	1113	39.267	-19.606	17.544	1.00	0.00
	ATOM	3731	CA	GLY	1113	38.234	-19.632	19.391	1.00	19.43
	ATOM	3732	C	GLY	1113	37.089	-20.616	19.363	1.00	16.65
35	ATOM	3733	O	GLY	1113	36.646	-21.008	18.289	1.00	18.76
	ATOM	3734	N	VAL	1114	36.534	-20.984	20.510	1.00	13.19
	ATOM	3735	H	VAL	1114	37.000	-20.757	21.341	1.00	0.00
	ATOM	3736	CA	VAL	1114	35.340	-21.823	20.532	1.00	14.63
	ATOM	3737	CB	VAL	1114	34.907	-22.210	21.964	1.00	15.86

	ATOM	3738	CG1	VAL	1114	33.601	-22.998	21.950	1.00	12.00
	ATOM	3739	CG2	VAL	1114	35.981	-23.080	22.586	1.00	18.74
	ATOM	3740	C	VAL	1114	34.182	-21.083	19.903	1.00	13.31
	ATOM	3741	O	VAL	1114	33.443	-21.670	19.117	1.00	17.48
5	ATOM	3742	N	PHE	1115	33.998	-19.804	20.235	1.00	11.59
	ATOM	3743	H	PHE	1115	34.572	-19.392	20.907	1.00	0.00
	ATOM	3744	CA	PHE	1115	32.902	-19.029	19.669	1.00	14.67
	ATOM	3745	CB	PHE	1115	32.909	-17.600	20.244	1.00	10.62
	ATOM	3746	CG	PHE	1115	31.577	-16.871	20.131	1.00	9.10
10	ATOM	3747	CD1	PHE	1115	30.397	-17.551	19.840	1.00	7.14
	ATOM	3748	CD2	PHE	1115	31.537	-15.490	20.321	1.00	11.41
	ATOM	3749	CE1	PHE	1115	29.199	-16.865	19.742	1.00	9.87
	ATOM	3750	CE2	PHE	1115	30.328	-14.805	20.222	1.00	9.09
	ATOM	3751	CZ	PHE	1115	29.161	-15.488	19.934	1.00	7.44
15	ATOM	3752	C	PHE	1115	33.025	-18.962	18.146	1.00	17.73
	ATOM	3753	O	PHE	1115	32.066	-19.184	17.415	1.00	16.85
	ATOM	3754	N	ASP	1116	34.234	-18.697	17.657	1.00	18.54
	ATOM	3755	H	ASP	1116	34.964	-18.588	18.291	1.00	0.00
	ATOM	3756	CA	ASP	1116	34.524	-18.601	16.242	1.00	21.41
20	ATOM	3757	CB	ASP	1116	36.045	-18.374	16.039	1.00	26.96
	ATOM	3758	CG	ASP	1116	36.719	-17.147	16.693	1.00	29.54
	ATOM	3759	OD1	ASP	1116	37.891	-16.890	16.396	1.00	32.73
	ATOM	3760	OD2	ASP	1116	36.110	-16.449	17.506	1.00	33.86
	ATOM	3761	C	ASP	1116	34.076	-19.895	15.576	1.00	18.86
25	ATOM	3762	O	ASP	1116	33.320	-19.831	14.610	1.00	20.05
	ATOM	3763	N	CYS	1117	34.413	-21.061	16.139	1.00	18.63
	ATOM	3764	H	CYS	1117	34.979	-21.075	16.939	1.00	0.00
	ATOM	3765	CA	CYS	1117	34.034	-22.350	15.572	1.00	17.24
	ATOM	3766	CB	CYS	1117	34.723	-23.478	16.348	1.00	18.30
30	ATOM	3767	SG	CYS	1117	36.536	-23.316	16.425	1.00	26.14
	ATOM	3768	C	CYS	1117	32.531	-22.513	15.634	1.00	14.66
	ATOM	3769	O	CYS	1117	31.923	-23.045	14.701	1.00	21.58
	ATOM	3770	N	LEU	1118	31.881	-21.997	16.680	1.00	16.74
	ATOM	3771	H	LEU	1118	32.402	-21.553	17.381	1.00	0.00
35	ATOM	3772	CA	LEU	1118	30.431	-22.098	16.849	1.00	14.92
	ATOM	3773	CB	LEU	1118	29.978	-21.517	18.192	1.00	15.40
	ATOM	3774	CG	LEU	1118	28.763	-22.045	18.959	1.00	19.35
	ATOM	3775	CD1	LEU	1118	28.307	-20.886	19.786	1.00	20.69
	ATOM	3776	CD2	LEU	1118	27.544	-22.433	18.126	1.00	19.69

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	ATOM	3777	C	LEU	1118	29.739	-21.314	15.755	1.00	13.42
	ATOM	3778	O	LEU	1118	28.874	-21.856	15.066	1.00	17.93
	ATOM	3779	N	ARG	1119	30.103	-20.049	15.560	1.00	18.04
	ATOM	3780	H	ARG	1119	30.822	-19.690	16.116	1.00	0.00
5	ATOM	3781	CA	ARG	1119	29.506	-19.188	14.549	1.00	20.03
	ATOM	3782	CB	ARG	1119	30.169	-17.814	14.511	1.00	23.89
	ATOM	3783	CG	ARG	1119	29.866	-16.868	15.654	1.00	23.86
	ATOM	3784	CD	ARG	1119	30.650	-15.585	15.352	1.00	24.54
	ATOM	3785	NE	ARG	1119	31.494	-15.252	16.483	1.00	27.03
10	ATOM	3786	HE	ARG	1119	31.083	-15.218	17.373	1.00	0.00
	ATOM	3787	CZ	ARG	1119	32.793	-14.973	16.400	1.00	27.13
	ATOM	3788	NH1	ARG	1119	33.472	-14.963	15.257	1.00	28.80
	ATOM	3789	HH11	ARG	1119	33.013	-15.183	14.396	1.00	0.00
	ATOM	3790	HH12	ARG	1119	34.449	-14.751	15.265	1.00	0.00
15	ATOM	3791	NH2	ARG	1119	33.442	-14.720	17.532	1.00	36.40
	ATOM	3792	HH21	ARG	1119	32.949	-14.741	18.402	1.00	0.00
	ATOM	3793	HH22	ARG	1119	34.418	-14.503	17.515	1.00	0.00
	ATOM	3794	C	ARG	1119	29.674	-19.828	13.182	1.00	20.52
	ATOM	3795	O	ARG	1119	28.718	-19.836	12.404	1.00	22.98
20	ATOM	3796	N	ASP	1120	30.848	-20.406	12.885	1.00	23.48
	ATOM	3797	H	ASP	1120	31.568	-20.357	13.552	1.00	0.00
	ATOM	3798	CA	ASP	1120	31.101	-21.113	11.627	1.00	22.85
	ATOM	3799	CB	ASP	1120	32.511	-21.706	11.604	1.00	21.65
	ATOM	3800	CG	ASP	1120	33.616	-20.731	11.243	1.00	24.26
25	ATOM	3801	OD1	ASP	1120	33.434	-19.945	10.315	1.00	32.04
	ATOM	3802	OD2	ASP	1120	34.670	-20.772	11.878	1.00	26.48
	ATOM	3803	C	ASP	1120	30.113	-22.243	11.386	1.00	24.84
	ATOM	3804	O	ASP	1120	29.540	-22.365	10.290	1.00	24.21
	ATOM	3805	N	ALA	1121	29.888	-23.054	12.430	1.00	22.80
30	ATOM	3806	H	ALA	1121	30.393	-22.917	13.262	1.00	0.00
	ATOM	3807	CA	ALA	1121	28.937	-24.140	12.339	1.00	22.02
	ATOM	3808	CB	ALA	1121	28.945	-24.943	13.637	1.00	22.11
	ATOM	3809	C	ALA	1121	27.545	-23.577	12.085	1.00	23.31
	ATOM	3810	O	ALA	1121	26.809	-24.130	11.262	1.00	24.82
35	ATOM	3811	N	MET	1122	27.156	-22.459	12.713	1.00	21.97
	ATOM	3812	H	MET	1122	27.767	-22.050	13.365	1.00	0.00
	ATOM	3813	CA	MET	1122	25.854	-21.832	12.467	1.00	18.45
	ATOM	3814	CB	MET	1122	25.613	-20.720	13.492	1.00	17.14
	ATOM	3815	CG	MET	1122	25.432	-21.261	14.904	1.00	19.15

	ATOM	3816	SD	MET	1122	25.599	-20.024	16.221	1.00	18.27
	ATOM	3817	CE	MET	1122	24.071	-19.187	15.883	1.00	11.73
	ATOM	3818	C	MET	1122	25.766	-21.255	11.042	1.00	17.93
	ATOM	3819	O	MET	1122	24.772	-21.488	10.354	1.00	14.65
5	ATOM	3820	N	VAL	1123	26.755	-20.516	10.533	1.00	19.13
	ATOM	3821	H	VAL	1123	27.531	-20.361	11.101	1.00	0.00
	ATOM	3822	CA	VAL	1123	26.772	-20.019	9.158	1.00	26.08
	ATOM	3823	CB	VAL	1123	28.184	-19.388	8.881	1.00	28.32
	ATOM	3824	CG1	VAL	1123	28.276	-18.942	7.432	1.00	29.68
10	ATOM	3825	CG2	VAL	1123	28.427	-18.162	9.766	1.00	28.12
	ATOM	3826	C	VAL	1123	26.469	-21.191	8.193	1.00	27.54
	ATOM	3827	O	VAL	1123	25.512	-21.163	7.406	1.00	28.82
	ATOM	3828	N	ARG	1124	27.237	-22.266	8.331	1.00	29.08
	ATOM	3829	H	ARG	1124	27.954	-22.226	9.002	1.00	0.00
15	ATOM	3830	CA	ARG	1124	27.114	-23.478	7.540	1.00	32.51
	ATOM	3831	CB	ARG	1124	28.229	-24.419	8.025	1.00	34.11
	ATOM	3832	CG	ARG	1124	28.670	-25.610	7.190	1.00	34.35
	ATOM	3833	CD	ARG	1124	30.198	-25.740	7.290	1.00	37.42
	ATOM	3834	NE	ARG	1124	30.680	-25.911	8.658	1.00	44.31
20	ATOM	3835	HE	ARG	1124	30.151	-26.458	9.275	1.00	0.00
	ATOM	3836	CZ	ARG	1124	31.813	-25.353	9.121	1.00	46.35
	ATOM	3837	NH1	ARG	1124	32.599	-24.585	8.349	1.00	44.58
	ATOM	3838	HH11	ARG	1124	32.350	-24.406	7.397	1.00	0.00
	ATOM	3839	HH12	ARG	1124	33.435	-24.188	8.726	1.00	0.00
25	ATOM	3840	NH2	ARG	1124	32.150	-25.573	10.396	1.00	41.78
	ATOM	3841	HH21	ARG	1124	31.564	-26.138	10.975	1.00	0.00
	ATOM	3842	HH22	ARG	1124	32.989	-25.172	10.767	1.00	0.00
	ATOM	3843	C	ARG	1124	25.742	-24.136	7.608	1.00	32.81
	ATOM	3844	O	ARG	1124	25.047	-24.237	6.596	1.00	32.98
30	ATOM	3845	N	ASP	1125	25.291	-24.527	8.793	1.00	34.45
	ATOM	3846	H	ASP	1125	25.833	-24.328	9.586	1.00	0.00
	ATOM	3847	CA	ASP	1125	24.018	-25.200	8.971	1.00	40.31
	ATOM	3848	CB	ASP	1125	23.838	-25.398	10.479	1.00	45.28
	ATOM	3849	CG	ASP	1125	22.618	-26.178	10.965	1.00	53.34
35	ATOM	3850	OD1	ASP	1125	22.200	-27.129	10.297	1.00	58.74
	ATOM	3851	OD2	ASP	1125	22.095	-25.835	12.031	1.00	56.41
	ATOM	3852	C	ASP	1125	22.850	-24.434	8.347	1.00	42.48
	ATOM	3853	O	ASP	1125	21.921	-25.020	7.779	1.00	43.18
	ATOM	3854	N	TYR	1126	22.936	-23.104	8.375	1.00	43.78

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	ATOM	3855	H	TYR	1126	23.736	-22.681	8.755	1.00	0.00
	ATOM	3856	CA	TYR	1126	21.869	-22.272	7.859	1.00	45.00
	ATOM	3857	CB	TYR	1126	21.936	-20.897	8.576	1.00	49.30
	ATOM	3858	CG	TYR	1126	21.814	-21.009	10.117	1.00	56.17
5	ATOM	3859	CD1	TYR	1126	21.368	-22.198	10.731	1.00	55.50
	ATOM	3860	CE1	TYR	1126	21.340	-22.338	12.118	1.00	54.12
	ATOM	3861	CD2	TYR	1126	22.220	-19.948	10.943	1.00	58.14
	ATOM	3862	CE2	TYR	1126	22.191	-20.084	12.341	1.00	57.63
	ATOM	3863	CZ	TYR	1126	21.753	-21.282	12.916	1.00	55.36
10	ATOM	3864	OH	TYR	1126	21.728	-21.434	14.286	1.00	52.52
	ATOM	3865	HH	TYR	1126	21.465	-22.334	14.501	1.00	0.00
	ATOM	3866	C	TYR	1126	21.978	-22.174	6.348	1.00	43.40
	ATOM	3867	O	TYR	1126	20.947	-22.293	5.687	1.00	42.11
	ATOM	3868	N	VAL	1127	23.156	-22.080	5.722	1.00	43.86
15	ATOM	3869	H	VAL	1127	23.975	-22.025	6.260	1.00	0.00
	ATOM	3870	CA	VAL	1127	23.249	-22.080	4.256	1.00	41.19
	ATOM	3871	CB	VAL	1127	24.703	-21.748	3.848	1.00	38.42
	ATOM	3872	CG1	VAL	1127	24.955	-22.021	2.377	1.00	40.55
	ATOM	3873	CG2	VAL	1127	24.935	-20.249	4.079	1.00	34.48
20	ATOM	3874	C	VAL	1127	22.799	-23.440	3.720	1.00	42.71
	ATOM	3875	O	VAL	1127	22.056	-23.517	2.743	1.00	44.92
	ATOM	3876	N	ARG	1128	23.170	-24.522	4.388	1.00	44.87
	ATOM	3877	H	ARG	1128	23.800	-24.401	5.126	1.00	0.00
	ATOM	3878	CA	ARG	1128	22.715	-25.869	4.086	1.00	47.89
25	ATOM	3879	CB	ARG	1128	23.211	-26.815	5.184	1.00	48.33
	ATOM	3880	CG	ARG	1128	24.324	-27.807	4.876	1.00	49.48
	ATOM	3881	CD	ARG	1128	23.765	-29.032	4.161	1.00	52.30
	ATOM	3882	NE	ARG	1128	24.794	-30.002	3.801	1.00	55.87
	ATOM	3883	HE	ARG	1128	25.620	-30.046	4.326	1.00	0.00
30	ATOM	3884	CZ	ARG	1128	24.648	-30.839	2.762	1.00	57.66
	ATOM	3885	NH1	ARG	1128	23.554	-30.837	1.996	1.00	56.79
	ATOM	3886	HH11	ARG	1128	22.801	-30.206	2.186	1.00	0.00
	ATOM	3887	HH12	ARG	1128	23.484	-31.474	1.228	1.00	0.00
	ATOM	3888	NH2	ARG	1128	25.621	-31.699	2.468	1.00	58.17
35	ATOM	3889	HH21	ARG	1128	26.455	-31.725	3.020	1.00	0.00
	ATOM	3890	HH22	ARG	1128	25.511	-32.324	1.697	1.00	0.00
	ATOM	3891	C	ARG	1128	21.187	-25.967	3.988	1.00	52.36
	ATOM	3892	O	ARG	1128	20.653	-26.862	3.328	1.00	52.10
	ATOM	3893	N	GLN	1129	20.433	-25.085	4.643	1.00	57.83

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	ATOM	3894	H	GLN	1129	20.853	-24.370	5.162	1.00	0.00
	ATOM	3895	CA	GLN	1129	18.987	-25.157	4.581	1.00	61.29
	ATOM	3896	CB	GLN	1129	18.425	-25.478	5.972	1.00	62.70
	ATOM	3897	CG	GLN	1129	18.802	-24.439	7.009	1.00	68.83
5	ATOM	3898	CD	GLN	1129	18.109	-24.567	8.352	1.00	72.83
	ATOM	3899	OE1	GLN	1129	18.096	-25.602	9.015	1.00	75.79
	ATOM	3900	NE2	GLN	1129	17.487	-23.483	8.785	1.00	74.31
	ATOM	3901	HE21	GLN	1129	17.461	-22.696	8.206	1.00	0.00
	ATOM	3902	HE22	GLN	1129	17.131	-23.512	9.698	1.00	0.00
10	ATOM	3903	C	GLN	1129	18.289	-23.917	4.038	1.00	61.62
	ATOM	3904	O	GLN	1129	17.064	-23.999	3.915	1.00	63.97
	ATOM	3905	N	THR	1130	18.924	-22.761	3.784	1.00	61.19
	ATOM	3906	H	THR	1130	19.871	-22.634	4.007	1.00	0.00
	ATOM	3907	CA	THR	1130	18.211	-21.648	3.172	1.00	62.61
15	ATOM	3908	CB	THR	1130	18.647	-20.261	3.800	1.00	62.24
	ATOM	3909	OG1	THR	1130	20.069	-20.145	3.708	1.00	61.26
	ATOM	3910	HG1	THR	1130	20.285	-19.197	3.660	1.00	0.00
	ATOM	3911	CG2	THR	1130	18.183	-20.116	5.249	1.00	62.20
	ATOM	3912	C	THR	1130	18.529	-21.708	1.670	1.00	65.28
20	ATOM	3913	O	THR	1130	17.842	-22.402	0.907	1.00	66.03
	ATOM	3914	N	TRP	1131	19.601	-21.071	1.173	1.00	65.49
	ATOM	3915	H	TRP	1131	20.224	-20.655	1.806	1.00	0.00
	ATOM	3916	CA	TRP	1131	19.960	-21.099	-0.236	1.00	65.51
	ATOM	3917	CB	TRP	1131	20.573	-19.749	-0.617	1.00	65.52
25	ATOM	3918	CG	TRP	1131	20.672	-19.437	-2.110	1.00	69.50
	ATOM	3919	CD2	TRP	1131	19.692	-19.558	-3.075	1.00	70.86
	ATOM	3920	CE2	TRP	1131	20.344	-19.011	-4.192	1.00	71.04
	ATOM	3921	CE3	TRP	1131	18.375	-20.015	-3.203	1.00	71.56
	ATOM	3922	CD1	TRP	1131	21.824	-18.885	-2.606	1.00	71.98
30	ATOM	3923	NE1	TRP	1131	21.587	-18.632	-3.868	1.00	72.22
	ATOM	3924	HE1	TRP	1131	22.168	-18.111	-4.465	1.00	0.00
	ATOM	3925	CZ2	TRP	1131	19.709	-18.910	-5.429	1.00	69.81
	ATOM	3926	CZ3	TRP	1131	17.731	-19.914	-4.442	1.00	71.09
	ATOM	3927	CH2	TRP	1131	18.395	-19.365	-5.546	1.00	71.65
35	ATOM	3928	C	TRP	1131	20.973	-22.232	-0.317	1.00	65.31
	ATOM	3929	O	TRP	1131	22.182	-21.998	-0.366	1.00	68.03
	ATOM	3930	N	LYS	1132	20.440	-23.455	-0.271	1.00	63.74
	ATOM	3931	H	LYS	1132	19.461	-23.497	-0.202	1.00	0.00
	ATOM	3932	CA	LYS	1132	21.175	-24.716	-0.242	1.00	63.56

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	ATOM	3933	CB	LYS	1132	20.189	-25.850	-0.533	1.00	62.60
	ATOM	3934	CG	LYS	1132	19.225	-26.249	0.555	1.00	61.93
	ATOM	3935	CD	LYS	1132	18.699	-27.624	0.181	1.00	62.47
	ATOM	3936	CE	LYS	1132	17.702	-28.156	1.197	1.00	66.22
5	ATOM	3937	NZ	LYS	1132	16.467	-27.393	1.165	1.00	69.52
	ATOM	3938	HZ1	LYS	1132	16.046	-27.465	0.217	1.00	0.00
	ATOM	3939	HZ2	LYS	1132	16.673	-26.395	1.379	1.00	0.00
	ATOM	3940	HZ3	LYS	1132	15.800	-27.767	1.870	1.00	0.00
	ATOM	3941	C	LYS	1132	22.422	-24.947	-1.106	1.00	65.13
10	ATOM	3942	O	LYS	1132	22.493	-25.877	-1.923	1.00	68.19
	ATOM	3943	N	LEU	1133	23.484	-24.171	-0.954	1.00	63.90
	ATOM	3944	H	LEU	1133	23.479	-23.489	-0.250	1.00	0.00
	ATOM	3945	CA	LEU	1133	24.674	-24.387	-1.743	1.00	63.65
	ATOM	3946	CB	LEU	1133	25.465	-23.079	-1.895	1.00	64.57
15	ATOM	3947	CG	LEU	1133	24.808	-21.770	-2.401	1.00	63.39
	ATOM	3948	CD1	LEU	1133	25.918	-20.803	-2.797	1.00	60.88
	ATOM	3949	CD2	LEU	1133	23.920	-22.009	-3.616	1.00	62.28
	ATOM	3950	C	LEU	1133	25.426	-25.401	-0.901	1.00	65.76
	ATOM	3951	O	LEU	1133	25.843	-25.085	0.212	1.00	68.00
20	ATOM	3952	N	GLU	1134	25.537	-26.646	-1.361	1.00	66.71
	ATOM	3953	H	GLU	1134	25.157	-26.844	-2.241	1.00	0.00
	ATOM	3954	CA	GLU	1134	26.201	-27.707	-0.605	1.00	65.88
	ATOM	3955	CB	GLU	1134	25.354	-28.997	-0.610	1.00	67.01
	ATOM	3956	CG	GLU	1134	23.846	-28.933	-0.907	1.00	68.05
25	ATOM	3957	CD	GLU	1134	22.932	-28.316	0.146	1.00	69.18
	ATOM	3958	OE1	GLU	1134	23.314	-27.338	0.789	1.00	69.90
	ATOM	3959	OE2	GLU	1134	21.816	-28.815	0.308	1.00	67.93
	ATOM	3960	C	GLU	1134	27.576	-28.031	-1.190	1.00	64.86
	ATOM	3961	O	GLU	1134	28.087	-27.284	-2.032	1.00	65.19
30	ATOM	3962	N	GLY	1135	28.237	-29.113	-0.748	1.00	63.94
	ATOM	3963	H	GLY	1135	27.890	-29.572	0.041	1.00	0.00
	ATOM	3964	CA	GLY	1135	29.510	-29.581	-1.300	1.00	64.32
	ATOM	3965	C	GLY	1135	30.626	-28.564	-1.134	1.00	65.04
	ATOM	3966	O	GLY	1135	30.865	-28.078	-0.027	1.00	69.14
35	ATOM	3967	N	GLU	1136	31.305	-28.230	-2.232	1.00	65.55
	ATOM	3968	H	GLU	1136	31.118	-28.749	-3.038	1.00	0.00
	ATOM	3969	CA	GLU	1136	32.335	-27.183	-2.250	1.00	63.31
	ATOM	3970	CB	GLU	1136	33.131	-27.142	-3.579	1.00	67.04
	ATOM	3971	CG	GLU	1136	32.638	-27.887	-4.845	1.00	70.75

	ATOM	3972	CD	GLU	1136	31.274	-27.511	-5.428	1.00	72.63
	ATOM	3973	OE1	GLU	1136	30.272	-28.090	-4.999	1.00	72.08
	ATOM	3974	OE2	GLU	1136	31.218	-26.661	-6.321	1.00	72.72
	ATOM	3975	C	GLU	1136	31.703	-25.810	-2.070	1.00	58.99
5	ATOM	3976	O	GLU	1136	32.147	-24.983	-1.268	1.00	56.93
	ATOM	3977	N	ALA	1137	30.581	-25.625	-2.766	1.00	56.11
	ATOM	3978	H	ALA	1137	30.196	-26.378	-3.254	1.00	0.00
	ATOM	3979	CA	ALA	1137	29.850	-24.377	-2.767	1.00	56.06
	ATOM	3980	CB	ALA	1137	28.617	-24.541	-3.663	1.00	55.23
10	ATOM	3981	C	ALA	1137	29.446	-23.931	-1.362	1.00	55.98
	ATOM	3982	O	ALA	1137	29.361	-22.731	-1.087	1.00	54.23
	ATOM	3983	N	LEU	1138	29.238	-24.894	-0.464	1.00	57.71
	ATOM	3984	H	LEU	1138	29.212	-25.815	-0.787	1.00	0.00
	ATOM	3985	CA	LEU	1138	28.985	-24.630	0.947	1.00	60.29
15	ATOM	3986	CB	LEU	1138	28.623	-25.949	1.639	1.00	55.39
	ATOM	3987	CG	LEU	1138	28.039	-26.034	3.047	1.00	54.97
	ATOM	3988	CD1	LEU	1138	26.745	-25.238	3.210	1.00	49.34
	ATOM	3989	CD2	LEU	1138	27.782	-27.510	3.310	1.00	52.82
	ATOM	3990	C	LEU	1138	30.257	-24.016	1.541	1.00	61.97
20	ATOM	3991	O	LEU	1138	30.199	-22.866	1.993	1.00	62.86
	ATOM	3992	N	GLU	1139	31.421	-24.691	1.488	1.00	61.86
	ATOM	3993	H	GLU	1139	31.407	-25.596	1.112	1.00	0.00
	ATOM	3994	CA	GLU	1139	32.702	-24.191	2.000	1.00	62.74
	ATOM	3995	CB	GLU	1139	33.815	-25.131	1.497	1.00	61.24
25	ATOM	3996	CG	GLU	1139	35.261	-24.889	1.948	1.00	57.30
	ATOM	3997	CD	GLU	1139	36.311	-25.774	1.269	1.00	55.83
	ATOM	3998	OE1	GLU	1139	36.544	-25.580	0.074	1.00	57.77
	ATOM	3999	OE2	GLU	1139	36.899	-26.646	1.924	1.00	50.09
	ATOM	4000	C	GLU	1139	32.984	-22.739	1.587	1.00	65.63
30	ATOM	4001	O	GLU	1139	33.420	-21.921	2.417	1.00	66.43
	ATOM	4002	N	GLN	1140	32.682	-22.377	0.325	1.00	65.95
	ATOM	4003	H	GLN	1140	32.365	-23.071	-0.297	1.00	0.00
	ATOM	4004	CA	GLN	1140	32.876	-21.003	-0.136	1.00	66.03
	ATOM	4005	CB	GLN	1140	32.967	-20.930	-1.681	1.00	67.56
35	ATOM	4006	CG	GLN	1140	31.674	-20.780	-2.496	1.00	72.83
	ATOM	4007	CD	GLN	1140	31.587	-21.593	-3.783	1.00	77.61
	ATOM	4008	OE1	GLN	1140	32.482	-22.341	-4.178	1.00	79.83
	ATOM	4009	NE2	GLN	1140	30.460	-21.524	-4.480	1.00	79.79
	ATOM	4010	HE21	GLN	1140	29.726	-20.982	-4.126	1.00	0.00

	ATOM	4011	HE22	GLN	1140	30.439	-22.013	-5.326	1.00	0.00
	ATOM	4012	C	GLN	1140	31.738	-20.111	0.344	1.00	65.43
	ATOM	4013	O	GLN	1140	32.001	-18.966	0.717	1.00	65.89
	ATOM	4014	N	ALA	1141	30.484	-20.593	0.404	1.00	64.48
5	ATOM	4015	H	ALA	1141	30.331	-21.536	0.181	1.00	0.00
	ATOM	4016	CA	ALA	1141	29.327	-19.805	0.819	1.00	63.19
	ATOM	4017	CB	ALA	1141	28.077	-20.670	0.840	1.00	60.31
	ATOM	4018	C	ALA	1141	29.515	-19.218	2.209	1.00	61.63
	ATOM	4019	O	ALA	1141	29.156	-18.073	2.488	1.00	60.18
10	ATOM	4020	N	ILE	1142	30.160	-20.006	3.067	1.00	61.25
	ATOM	4021	H	ILE	1142	30.402	-20.903	2.746	1.00	0.00
	ATOM	4022	CA	ILE	1142	30.484	-19.641	4.435	1.00	59.83
	ATOM	4023	CB	ILE	1142	31.157	-20.900	5.095	1.00	60.04
	ATOM	4024	CG2	ILE	1142	32.084	-20.514	6.259	1.00	63.09
15	ATOM	4025	CG1	ILE	1142	30.076	-21.816	5.665	1.00	58.69
	ATOM	4026	CD	ILE	1142	29.000	-22.397	4.736	1.00	54.31
	ATOM	4027	C	ILE	1142	31.367	-18.397	4.469	1.00	59.27
	ATOM	4028	O	ILE	1142	31.114	-17.476	5.251	1.00	57.70
	ATOM	4029	N	ILE	1143	32.397	-18.305	3.631	1.00	60.19
20	ATOM	4030	H	ILE	1143	32.567	-19.013	2.972	1.00	0.00
	ATOM	4031	CA	ILE	1143	33.242	-17.128	3.679	1.00	61.81
	ATOM	4032	CB	ILE	1143	34.659	-17.470	3.078	1.00	64.29
	ATOM	4033	CG2	ILE	1143	34.620	-17.636	1.554	1.00	63.53
	ATOM	4034	CG1	ILE	1143	35.640	-16.335	3.454	1.00	66.15
25	ATOM	4035	CD	ILE	1143	35.960	-16.121	4.963	1.00	61.98
	ATOM	4036	C	ILE	1143	32.552	-15.992	2.941	1.00	61.53
	ATOM	4037	O	ILE	1143	32.769	-14.816	3.240	1.00	62.25
	ATOM	4038	N	SER	1144	31.642	-16.318	2.030	1.00	63.73
	ATOM	4039	H	SER	1144	31.415	-17.258	1.876	1.00	0.00
30	ATOM	4040	CA	SER	1144	30.940	-15.310	1.265	1.00	64.99
	ATOM	4041	CB	SER	1144	30.516	-15.998	-0.048	1.00	65.52
	ATOM	4042	OG	SER	1144	31.608	-16.655	-0.702	1.00	60.59
	ATOM	4043	HG	SER	1144	32.049	-17.235	-0.076	1.00	0.00
	ATOM	4044	C	SER	1144	29.758	-14.731	2.067	1.00	65.32
35	ATOM	4045	O	SER	1144	28.634	-14.623	1.559	1.00	68.14
	ATOM	4046	N	GLN	1145	29.938	-14.325	3.335	1.00	63.50
	ATOM	4047	H	GLN	1145	30.843	-14.279	3.712	1.00	0.00
	ATOM	4048	CA	GLN	1145	28.809	-13.809	4.091	1.00	60.48
	ATOM	4049	CB	GLN	1145	28.723	-14.494	5.452	1.00	56.62

	ATOM	4050	CG	GLN	1145	28.142	-15.910	5.299	1.00	53.05
	ATOM	4051	CD	GLN	1145	26.825	-16.090	4.524	1.00	51.72
	ATOM	4052	OE1	GLN	1145	25.802	-15.428	4.735	1.00	53.41
	ATOM	4053	NE2	GLN	1145	26.771	-17.024	3.593	1.00	46.83
5	ATOM	4054	HE21	GLN	1145	27.582	-17.547	3.429	1.00	0.00
	ATOM	4055	HE22	GLN	1145	25.935	-17.136	3.098	1.00	0.00
	ATOM	4056	C	GLN	1145	28.790	-12.311	4.280	1.00	58.63
	ATOM	4057	O	GLN	1145	29.778	-11.635	4.576	1.00	56.87
	ATOM	4058	N	ALA	1146	27.578	-11.849	3.981	1.00	59.12
10	ATOM	4059	H	ALA	1146	26.897	-12.510	3.738	1.00	0.00
	ATOM	4060	CA	ALA	1146	27.193	-10.451	4.009	1.00	62.34
	ATOM	4061	CB	ALA	1146	25.679	-10.365	3.809	1.00	59.64
	ATOM	4062	C	ALA	1146	27.582	-9.759	5.314	1.00	65.19
	ATOM	4063	O	ALA	1146	27.167	-10.223	6.375	1.00	68.05
15	ATOM	4064	N	PRO	1147	28.322	-8.645	5.329	1.00	66.24
	ATOM	4065	CD	PRO	1147	28.322	-7.661	4.250	1.00	68.36
	ATOM	4066	CA	PRO	1147	29.113	-8.166	6.468	1.00	65.49
	ATOM	4067	CB	PRO	1147	29.549	-6.786	6.027	1.00	66.85
	ATOM	4068	CG	PRO	1147	29.610	-6.907	4.523	1.00	68.63
20	ATOM	4069	C	PRO	1147	28.493	-8.163	7.871	1.00	63.34
	ATOM	4070	O	PRO	1147	29.080	-8.699	8.816	1.00	61.92
	ATOM	4071	N	GLN	1148	27.298	-7.605	8.089	1.00	59.39
	ATOM	4072	H	GLN	1148	26.805	-7.235	7.326	1.00	0.00
	ATOM	4073	CA	GLN	1148	26.750	-7.591	9.436	1.00	54.07
25	ATOM	4074	CB	GLN	1148	25.679	-6.484	9.581	1.00	54.31
	ATOM	4075	CG	GLN	1148	24.390	-6.516	8.766	1.00	56.67
	ATOM	4076	CD	GLN	1148	24.445	-5.927	7.356	1.00	56.23
	ATOM	4077	OE1	GLN	1148	25.198	-6.360	6.475	1.00	57.34
	ATOM	4078	NE2	GLN	1148	23.635	-4.917	7.079	1.00	51.65
30	ATOM	4079	HE21	GLN	1148	23.090	-4.554	7.811	1.00	0.00
	ATOM	4080	HE22	GLN	1148	23.553	-4.591	6.160	1.00	0.00
	ATOM	4081	C	GLN	1148	26.164	-8.929	9.884	1.00	50.94
	ATOM	4082	O	GLN	1148	25.824	-9.064	11.061	1.00	47.58
	ATOM	4083	N	VAL	1149	26.097	-9.991	9.063	1.00	49.04
35	ATOM	4084	H	VAL	1149	26.493	-9.940	8.168	1.00	0.00
	ATOM	4085	CA	VAL	1149	25.492	-11.239	9.524	1.00	45.67
	ATOM	4086	CB	VAL	1149	25.146	-12.262	8.372	1.00	41.33
	ATOM	4087	CG1	VAL	1149	24.379	-11.486	7.327	1.00	44.52
	ATOM	4088	CG2	VAL	1149	26.342	-12.968	7.782	1.00	37.34

	ATOM	4089	C	VAL	1149	26.393	-11.954	10.518	1.00	43.99
	ATOM	4090	O	VAL	1149	25.900	-12.667	11.386	1.00	41.36
	ATOM	4091	N	GLU	1150	27.705	-11.733	10.479	1.00	42.85
	ATOM	4092	H	GLU	1150	28.054	-11.109	9.808	1.00	0.00
5	ATOM	4093	CA	GLU	1150	28.618	-12.389	11.398	1.00	42.22
	ATOM	4094	CB	GLU	1150	30.050	-12.009	11.046	1.00	46.21
	ATOM	4095	CG	GLU	1150	30.495	-12.414	9.621	1.00	57.47
	ATOM	4096	CD	GLU	1150	30.205	-11.422	8.478	1.00	62.05
	ATOM	4097	OE1	GLU	1150	31.050	-10.572	8.182	1.00	67.14
10	ATOM	4098	OE2	GLU	1150	29.142	-11.493	7.865	1.00	61.78
	ATOM	4099	C	GLU	1150	28.255	-11.931	12.803	1.00	38.38
	ATOM	4100	O	GLU	1150	27.993	-12.741	13.689	1.00	42.57
	ATOM	4101	N	LYS	1151	28.058	-10.619	12.937	1.00	35.01
	ATOM	4102	H	LYS	1151	28.150	-10.069	12.135	1.00	0.00
15	ATOM	4103	CA	LYS	1151	27.642	-9.981	14.175	1.00	30.94
	ATOM	4104	CB	LYS	1151	27.567	-8.423	14.081	1.00	34.99
	ATOM	4105	CG	LYS	1151	28.827	-7.591	13.773	1.00	39.28
	ATOM	4106	CD	LYS	1151	29.258	-7.778	12.320	1.00	44.76
	ATOM	4107	CE	LYS	1151	30.649	-7.256	12.041	1.00	47.25
20	ATOM	4108	NZ	LYS	1151	31.121	-7.818	10.788	1.00	45.73
	ATOM	4109	HZ1	LYS	1151	30.467	-7.579	10.016	1.00	0.00
	ATOM	4110	HZ2	LYS	1151	31.179	-8.852	10.886	1.00	0.00
	ATOM	4111	HZ3	LYS	1151	32.067	-7.440	10.576	1.00	0.00
	ATOM	4112	C	LYS	1151	26.241	-10.466	14.517	1.00	25.99
25	ATOM	4113	O	LYS	1151	25.943	-10.676	15.685	1.00	27.16
	ATOM	4114	N	LEU	1152	25.357	-10.684	13.540	1.00	22.11
	ATOM	4115	H	LEU	1152	25.620	-10.478	12.621	1.00	0.00
	ATOM	4116	CA	LEU	1152	23.993	-11.114	13.813	1.00	16.23
	ATOM	4117	CB	LEU	1152	23.177	-10.957	12.515	1.00	9.86
30	ATOM	4118	CG	LEU	1152	22.906	-9.504	12.080	1.00	11.37
	ATOM	4119	CD1	LEU	1152	22.338	-9.492	10.678	1.00	9.78
	ATOM	4120	CD2	LEU	1152	21.910	-8.841	13.005	1.00	11.47
	ATOM	4121	C	LEU	1152	23.896	-12.523	14.371	1.00	10.24
	ATOM	4122	O	LEU	1152	23.131	-12.774	15.299	1.00	9.17
35	ATOM	4123	N	ILE	1153	24.727	-13.419	13.841	1.00	13.04
	ATOM	4124	H	ILE	1153	25.319	-13.098	13.132	1.00	0.00
	ATOM	4125	CA	ILE	1153	24.864	-14.828	14.218	1.00	12.12
	ATOM	4126	CB	ILE	1153	25.744	-15.474	13.121	1.00	15.18
	ATOM	4127	CG2	ILE	1153	26.453	-16.748	13.547	1.00	14.74

	ATOM	4128	CG1	ILE	1153	24.803	-15.737	11.964	1.00	15.60
	ATOM	4129	CD	ILE	1153	25.554	-16.002	10.657	1.00	27.01
	ATOM	4130	C	ILE	1153	25.457	-14.936	15.614	1.00	12.01
	ATOM	4131	O	ILE	1153	24.938	-15.653	16.468	1.00	12.84
5	ATOM	4132	N	ALA	1154	26.552	-14.241	15.879	1.00	10.22
	ATOM	4133	H	ALA	1154	27.021	-13.803	15.135	1.00	0.00
	ATOM	4134	CA	ALA	1154	27.123	-14.168	17.201	1.00	11.63
	ATOM	4135	CB	ALA	1154	28.259	-13.194	17.110	1.00	8.82
	ATOM	4136	C	ALA	1154	26.107	-13.747	18.276	1.00	18.06
10	ATOM	4137	O	ALA	1154	25.901	-14.458	19.281	1.00	22.58
	ATOM	4138	N	THR	1155	25.380	-12.645	18.103	1.00	17.52
	ATOM	4139	H	THR	1155	25.577	-12.028	17.358	1.00	0.00
	ATOM	4140	CA	THR	1155	24.349	-12.242	19.065	1.00	18.83
	ATOM	4141	CB	THR	1155	23.904	-10.801	18.598	1.00	22.02
15	ATOM	4142	OG1	THR	1155	25.086	-9.989	18.654	1.00	25.75
	ATOM	4143	HG1	THR	1155	25.450	-9.946	19.545	1.00	0.00
	ATOM	4144	CG2	THR	1155	22.905	-10.096	19.487	1.00	26.93
	ATOM	4145	C	THR	1155	23.190	-13.272	19.190	1.00	20.86
	ATOM	4146	O	THR	1155	22.481	-13.310	20.208	1.00	18.89
20	ATOM	4147	N	THR	1156	22.963	-14.161	18.207	1.00	21.15
	ATOM	4148	H	THR	1156	23.450	-14.028	17.364	1.00	0.00
	ATOM	4149	CA	THR	1156	21.961	-15.233	18.199	1.00	18.52
	ATOM	4150	CB	THR	1156	21.500	-15.438	16.684	1.00	19.00
	ATOM	4151	OG1	THR	1156	20.596	-14.388	16.386	1.00	18.19
25	ATOM	4152	HG1	THR	1156	19.941	-14.355	17.088	1.00	0.00
	ATOM	4153	CG2	THR	1156	20.799	-16.746	16.399	1.00	21.79
	ATOM	4154	C	THR	1156	22.487	-16.548	18.816	1.00	15.90
	ATOM	4155	O	THR	1156	21.664	-17.362	19.249	1.00	13.44
	ATOM	4156	N	ALA	1157	23.812	-16.756	18.993	1.00	15.78
30	ATOM	4157	H	ALA	1157	24.421	-16.012	18.786	1.00	0.00
	ATOM	4158	CA	ALA	1157	24.391	-18.060	19.349	1.00	13.25
	ATOM	4159	CB	ALA	1157	25.908	-17.958	19.445	1.00	7.54
	ATOM	4160	C	ALA	1157	23.912	-18.755	20.604	1.00	13.91
	ATOM	4161	O	ALA	1157	23.814	-19.974	20.635	1.00	15.61
35	ATOM	4162	N	HIS	1158	23.520	-17.991	21.622	1.00	14.45
	ATOM	4163	H	HIS	1158	23.688	-17.032	21.526	1.00	0.00
	ATOM	4164	CA	HIS	1158	22.988	-18.518	22.860	1.00	10.20
	ATOM	4165	CB	HIS	1158	22.621	-17.348	23.802	1.00	8.12
	ATOM	4166	CG	HIS	1158	21.657	-16.322	23.213	1.00	8.39

	ATOM	4167	CD2	HIS	1158	20.290	-16.362	23.334	1.00	4.48
	ATOM	4168	ND1	HIS	1158	21.946	-15.266	22.462	1.00	8.59
	ATOM	4169	HD1	HIS	1158	22.832	-14.924	22.195	1.00	0.00
	ATOM	4170	CE1	HIS	1158	20.813	-14.687	22.128	1.00	5.15
5	ATOM	4171	NE2	HIS	1158	19.829	-15.355	22.654	1.00	6.40
	ATOM	4172	HE2	HIS	1158	18.888	-15.059	22.617	1.00	0.00
	ATOM	4173	C	HIS	1158	21.781	-19.429	22.688	1.00	14.20
	ATOM	4174	O	HIS	1158	21.585	-20.322	23.515	1.00	15.95
	ATOM	4175	N	GLU	1159	20.960	-19.294	21.636	1.00	18.68
10	ATOM	4176	H	GLU	1159	21.217	-18.718	20.883	1.00	0.00
	ATOM	4177	CA	GLU	1159	19.753	-20.112	21.496	1.00	20.00
	ATOM	4178	CB	GLU	1159	18.877	-19.607	20.388	1.00	24.35
	ATOM	4179	CG	GLU	1159	18.247	-18.240	20.637	1.00	31.35
	ATOM	4180	CD	GLU	1159	17.302	-17.760	19.540	1.00	32.75
15	ATOM	4181	OE1	GLU	1159	17.281	-18.339	18.449	1.00	32.14
	ATOM	4182	OE2	GLU	1159	16.581	-16.790	19.788	1.00	38.48
	ATOM	4183	C	GLU	1159	19.979	-21.585	21.214	1.00	23.06
	ATOM	4184	O	GLU	1159	19.147	-22.458	21.491	1.00	23.92
	ATOM	4185	N	ARG	1160	21.159	-21.818	20.657	1.00	25.06
20	ATOM	4186	H	ARG	1160	21.803	-21.086	20.550	1.00	0.00
	ATOM	4187	CA	ARG	1160	21.574	-23.139	20.254	1.00	29.23
	ATOM	4188	CB	ARG	1160	22.616	-23.065	19.111	1.00	30.90
	ATOM	4189	CG	ARG	1160	22.364	-22.145	17.916	1.00	31.60
	ATOM	4190	CD	ARG	1160	21.047	-22.440	17.215	1.00	35.44
25	ATOM	4191	NE	ARG	1160	20.988	-23.796	16.705	1.00	41.49
	ATOM	4192	HE	ARG	1160	21.639	-24.458	17.019	1.00	0.00
	ATOM	4193	CZ	ARG	1160	20.070	-24.189	15.816	1.00	44.62
	ATOM	4194	NH1	ARG	1160	19.143	-23.355	15.329	1.00	48.17
	ATOM	4195	HH11	ARG	1160	19.110	-22.401	15.626	1.00	0.00
30	ATOM	4196	HH12	ARG	1160	18.471	-23.690	14.669	1.00	0.00
	ATOM	4197	NH2	ARG	1160	20.066	-25.468	15.428	1.00	46.65
	ATOM	4198	HH21	ARG	1160	20.734	-26.107	15.803	1.00	0.00
	ATOM	4199	HH22	ARG	1160	19.398	-25.781	14.752	1.00	0.00
	ATOM	4200	C	ARG	1160	22.214	-23.843	21.437	1.00	27.73
35	ATOM	4201	O	ARG	1160	22.669	-24.984	21.293	1.00	30.26
	ATOM	4202	N	MET	1161	22.309	-23.215	22.614	1.00	25.32
	ATOM	4203	H	MET	1161	21.769	-22.422	22.814	1.00	0.00
	ATOM	4204	CA	MET	1161	23.045	-23.835	23.701	1.00	18.76
	ATOM	4205	CB	MET	1161	23.790	-22.792	24.485	1.00	11.53

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	ATOM	4206	CG	MET	1161	24.778	-22.042	23.647	1.00	13.13
	ATOM	4207	SD	MET	1161	25.964	-23.089	22.771	1.00	26.11
	ATOM	4208	CE	MET	1161	27.076	-23.610	24.041	1.00	21.15
	ATOM	4209	C	MET	1161	22.056	-24.545	24.593	1.00	12.35
5	ATOM	4210	O	MET	1161	20.927	-24.071	24.734	1.00	12.85
	ATOM	4211	N	PRO	1162	22.425	-25.665	25.233	1.00	12.69
	ATOM	4212	CD	PRO	1162	23.679	-26.372	24.996	1.00	9.78
	ATOM	4213	CA	PRO	1162	21.579	-26.392	26.190	1.00	10.28
	ATOM	4214	CB	PRO	1162	22.456	-27.563	26.550	1.00	9.48
10	ATOM	4215	CG	PRO	1162	23.862	-27.082	26.321	1.00	10.73
	ATOM	4216	C	PRO	1162	21.044	-25.611	27.407	1.00	9.82
	ATOM	4217	O	PRO	1162	20.058	-25.944	28.062	1.00	12.50
	ATOM	4218	N	TRP	1163	21.718	-24.527	27.743	1.00	11.52
	ATOM	4219	H	TRP	1163	22.473	-24.268	27.184	1.00	0.00
15	ATOM	4220	CA	TRP	1163	21.372	-23.683	28.862	1.00	10.72
	ATOM	4221	CB	TRP	1163	22.663	-23.045	29.405	1.00	4.48
	ATOM	4222	CG	TRP	1163	23.679	-22.401	28.454	1.00	4.54
	ATOM	4223	CD2	TRP	1163	23.669	-21.123	27.880	1.00	5.04
	ATOM	4224	CE2	TRP	1163	24.925	-21.090	27.255	1.00	5.29
20	ATOM	4225	CE3	TRP	1163	22.844	-19.996	27.775	1.00	2.00
	ATOM	4226	CD1	TRP	1163	24.838	-23.082	28.176	1.00	2.28
	ATOM	4227	NE1	TRP	1163	25.575	-22.263	27.457	1.00	6.80
	ATOM	4228	HE1	TRP	1163	26.499	-22.436	27.155	1.00	0.00
	ATOM	4229	CZ2	TRP	1163	25.363	-19.959	26.540	1.00	6.60
25	ATOM	4230	CZ3	TRP	1163	23.282	-18.873	27.055	1.00	2.00
	ATOM	4231	CH2	TRP	1163	24.533	-18.845	26.441	1.00	2.00
	ATOM	4232	C	TRP	1163	20.345	-22.622	28.520	1.00	11.70
	ATOM	4233	O	TRP	1163	19.793	-22.041	29.456	1.00	11.21
	ATOM	4234	N	TYR	1164	19.988	-22.349	27.258	1.00	12.21
30	ATOM	4235	H	TYR	1164	20.226	-22.947	26.519	1.00	0.00
	ATOM	4236	CA	TYR	1164	19.053	-21.280	26.979	1.00	9.05
	ATOM	4237	CB	TYR	1164	19.387	-20.582	25.667	1.00	11.55
	ATOM	4238	CG	TYR	1164	18.493	-19.365	25.402	1.00	9.69
	ATOM	4239	CD1	TYR	1164	18.541	-18.245	26.254	1.00	8.89
35	ATOM	4240	CE1	TYR	1164	17.687	-17.155	26.012	1.00	12.44
	ATOM	4241	CD2	TYR	1164	17.602	-19.386	24.314	1.00	8.85
	ATOM	4242	CE2	TYR	1164	16.756	-18.301	24.069	1.00	8.29
	ATOM	4243	CZ	TYR	1164	16.806	-17.192	24.921	1.00	13.30
	ATOM	4244	OH	TYR	1164	15.993	-16.110	24.673	1.00	15.18

	ATOM	4245	HH	TYR	1164	15.388	-16.300	23.946	1.00	0.00
	ATOM	4246	C	TYR	1164	17.676	-21.864	26.897	1.00	13.42
	ATOM	4247	O	TYR	1164	17.449	-22.907	26.271	1.00	16.65
	ATOM	4248	N	HIS	1165	16.757	-21.238	27.625	1.00	10.41
5	ATOM	4249	H	HIS	1165	17.023	-20.453	28.157	1.00	0.00
	ATOM	4250	CA	HIS	1165	15.386	-21.680	27.657	1.00	9.19
	ATOM	4251	CB	HIS	1165	15.046	-22.242	29.025	1.00	8.07
	ATOM	4252	CG	HIS	1165	15.822	-23.476	29.470	1.00	6.13
	ATOM	4253	CD2	HIS	1165	17.188	-23.531	29.603	1.00	3.28
10	ATOM	4254	ND1	HIS	1165	15.360	-24.673	29.834	1.00	5.83
	ATOM	4255	HD1	HIS	1165	14.432	-24.992	29.833	1.00	0.00
	ATOM	4256	CE1	HIS	1165	16.389	-25.423	30.172	1.00	2.00
	ATOM	4257	NE2	HIS	1165	17.481	-24.727	30.026	1.00	3.94
	ATOM	4258	HE2	HIS	1165	18.390	-25.104	30.044	1.00	0.00
15	ATOM	4259	C	HIS	1165	14.499	-20.488	27.359	1.00	12.21
	ATOM	4260	O	HIS	1165	14.122	-19.735	28.246	1.00	15.69
	ATOM	4261	N	SER	1166	14.123	-20.310	26.096	1.00	18.69
	ATOM	4262	H	SER	1166	14.377	-20.990	25.433	1.00	0.00
	ATOM	4263	CA	SER	1166	13.275	-19.235	25.580	1.00	22.32
20	ATOM	4264	CB	SER	1166	13.142	-19.448	24.077	1.00	24.30
	ATOM	4265	OG	SER	1166	12.997	-20.850	23.816	1.00	27.37
	ATOM	4266	HG	SER	1166	13.693	-21.116	23.199	1.00	0.00
	ATOM	4267	C	SER	1166	11.883	-19.119	26.201	1.00	25.68
	ATOM	4268	O	SER	1166	11.229	-18.073	26.253	1.00	28.35
25	ATOM	4269	N	SER	1167	11.484	-20.297	26.640	1.00	28.43
	ATOM	4270	H	SER	1167	12.094	-21.052	26.534	1.00	0.00
	ATOM	4271	CA	SER	1167	10.186	-20.640	27.174	1.00	30.35
	ATOM	4272	CB	SER	1167	9.981	-22.064	26.593	1.00	35.08
	ATOM	4273	OG	SER	1167	11.206	-22.853	26.583	1.00	35.86
30	ATOM	4274	HG	SER	1167	11.021	-23.626	26.039	1.00	0.00
	ATOM	4275	C	SER	1167	9.887	-20.535	28.688	1.00	27.36
	ATOM	4276	O	SER	1167	8.729	-20.731	29.066	1.00	25.18
	ATOM	4277	N	LEU	1168	10.815	-20.231	29.614	1.00	24.64
	ATOM	4278	H	LEU	1168	11.680	-19.865	29.328	1.00	0.00
35	ATOM	4279	CA	LEU	1168	10.498	-20.295	31.044	1.00	22.29
	ATOM	4280	CB	LEU	1168	11.557	-21.101	31.794	1.00	19.48
	ATOM	4281	CG	LEU	1168	12.002	-22.465	31.275	1.00	19.31
	ATOM	4282	CD1	LEU	1168	13.095	-22.977	32.202	1.00	21.06
	ATOM	4283	CD2	LEU	1168	10.868	-23.462	31.244	1.00	14.54

	ATOM	4284	C	LEU	1168	10.306	-19.012	31.834	1.00	17.29
	ATOM	4285	O	LEU	1168	11.015	-18.020	31.664	1.00	18.35
	ATOM	4286	N	THR	1169	9.313	-19.044	32.722	1.00	18.42
	ATOM	4287	H	THR	1169	8.737	-19.830	32.790	1.00	0.00
5	ATOM	4288	CA	THR	1169	9.095	-17.971	33.682	1.00	17.82
	ATOM	4289	CB	THR	1169	7.653	-17.980	34.221	1.00	19.72
	ATOM	4290	OG1	THR	1169	7.429	-19.264	34.804	1.00	19.56
	ATOM	4291	HG1	THR	1169	6.475	-19.419	34.793	1.00	0.00
	ATOM	4292	CG2	THR	1169	6.636	-17.685	33.152	1.00	18.55
10	ATOM	4293	C	THR	1169	10.043	-18.209	34.852	1.00	10.98
	ATOM	4294	O	THR	1169	10.641	-19.285	34.937	1.00	13.16
	ATOM	4295	N	ARG	1170	10.164	-17.270	35.781	1.00	12.27
	ATOM	4296	H	ARG	1170	9.759	-16.397	35.585	1.00	0.00
	ATOM	4297	CA	ARG	1170	10.945	-17.431	36.998	1.00	13.63
15	ATOM	4298	CB	ARG	1170	10.726	-16.204	37.885	1.00	9.48
	ATOM	4299	CG	ARG	1170	11.337	-16.386	39.259	1.00	11.46
	ATOM	4300	CD	ARG	1170	10.964	-15.269	40.208	1.00	11.17
	ATOM	4301	NE	ARG	1170	11.912	-14.216	39.978	1.00	15.66
	ATOM	4302	HE	ARG	1170	11.832	-13.703	39.151	1.00	0.00
20	ATOM	4303	CZ	ARG	1170	12.818	-13.829	40.866	1.00	13.85
	ATOM	4304	NH1	ARG	1170	13.634	-12.864	40.468	1.00	13.48
	ATOM	4305	HH11	ARG	1170	13.543	-12.488	39.546	1.00	0.00
	ATOM	4306	HH12	ARG	1170	14.351	-12.528	41.072	1.00	0.00
	ATOM	4307	NH2	ARG	1170	12.878	-14.317	42.111	1.00	15.64
25	ATOM	4308	HH21	ARG	1170	12.202	-14.988	42.417	1.00	0.00
	ATOM	4309	HH22	ARG	1170	13.578	-13.986	42.747	1.00	0.00
	ATOM	4310	C	ARG	1170	10.584	-18.709	37.768	1.00	14.28
	ATOM	4311	O	ARG	1170	11.437	-19.520	38.145	1.00	15.79
	ATOM	4312	N	GLU	1171	9.292	-18.934	37.913	1.00	12.16
30	ATOM	4313	H	GLU	1171	8.675	-18.340	37.445	1.00	0.00
	ATOM	4314	CA	GLU	1171	8.792	-20.075	38.632	1.00	16.73
	ATOM	4315	CB	GLU	1171	7.269	-20.067	38.688	1.00	24.50
	ATOM	4316	CG	GLU	1171	6.607	-18.830	39.300	1.00	39.58
	ATOM	4317	CD	GLU	1171	6.664	-17.554	38.452	1.00	46.40
35	ATOM	4318	OE1	GLU	1171	7.176	-16.541	38.935	1.00	48.99
	ATOM	4319	OE2	GLU	1171	6.203	-17.579	37.308	1.00	53.13
	ATOM	4320	C	GLU	1171	9.232	-21.344	37.952	1.00	16.53
	ATOM	4321	O	GLU	1171	9.811	-22.204	38.602	1.00	19.25
	ATOM	4322	N	GLU	1172	9.021	-21.438	36.633	1.00	20.89

	ATOM	4323	H	GLU	1172	8.697	-20.643	36.157	1.00	0.00
	ATOM	4324	CA	GLU	1172	9.338	-22.632	35.849	1.00	17.91
	ATOM	4325	CB	GLU	1172	8.892	-22.458	34.416	1.00	17.90
	ATOM	4326	CG	GLU	1172	7.369	-22.486	34.271	1.00	27.69
5	ATOM	4327	CD	GLU	1172	6.780	-21.903	32.984	1.00	27.08
	ATOM	4328	OE1	GLU	1172	7.359	-22.058	31.915	1.00	34.51
	ATOM	4329	OE2	GLU	1172	5.723	-21.282	33.052	1.00	32.11
	ATOM	4330	C	GLU	1172	10.814	-22.927	35.866	1.00	15.95
	ATOM	4331	O	GLU	1172	11.207	-24.083	35.976	1.00	18.39
10	ATOM	4332	N	ALA	1173	11.643	-21.889	35.819	1.00	17.72
	ATOM	4333	H	ALA	1173	11.266	-20.991	35.737	1.00	0.00
	ATOM	4334	CA	ALA	1173	13.088	-22.029	35.894	1.00	17.23
	ATOM	4335	CB	ALA	1173	13.744	-20.657	35.803	1.00	16.89
	ATOM	4336	C	ALA	1173	13.504	-22.681	37.208	1.00	14.94
15	ATOM	4337	O	ALA	1173	14.228	-23.673	37.220	1.00	17.02
	ATOM	4338	N	GLU	1174	13.008	-22.180	38.330	1.00	15.36
	ATOM	4339	H	GLU	1174	12.387	-21.420	38.258	1.00	0.00
	ATOM	4340	CA	GLU	1174	13.300	-22.759	39.637	1.00	15.72
	ATOM	4341	CB	GLU	1174	12.528	-22.007	40.702	1.00	14.38
20	ATOM	4342	CG	GLU	1174	12.963	-20.560	40.838	1.00	17.68
	ATOM	4343	CD	GLU	1174	12.413	-19.797	42.032	1.00	20.98
	ATOM	4344	OE1	GLU	1174	11.503	-20.278	42.705	1.00	28.76
	ATOM	4345	OE2	GLU	1174	12.902	-18.701	42.293	1.00	17.73
	ATOM	4346	C	GLU	1174	12.906	-24.235	39.680	1.00	17.50
25	ATOM	4347	O	GLU	1174	13.703	-25.090	40.077	1.00	15.79
	ATOM	4348	N	ARG	1175	11.703	-24.578	39.198	1.00	19.83
	ATOM	4349	H	ARG	1175	11.118	-23.863	38.863	1.00	0.00
	ATOM	4350	CA	ARG	1175	11.240	-25.958	39.149	1.00	19.46
	ATOM	4351	CB	ARG	1175	9.812	-26.015	38.618	1.00	22.12
30	ATOM	4352	CG	ARG	1175	8.805	-25.491	39.647	1.00	31.07
	ATOM	4353	CD	ARG	1175	7.351	-25.744	39.250	1.00	37.43
	ATOM	4354	NE	ARG	1175	6.593	-24.512	39.055	1.00	40.92
	ATOM	4355	HE	ARG	1175	6.444	-23.921	39.823	1.00	0.00
	ATOM	4356	CZ	ARG	1175	6.092	-24.160	37.862	1.00	43.85
35	ATOM	4357	NH1	ARG	1175	6.260	-24.923	36.776	1.00	44.41
	ATOM	4358	HH11	ARG	1175	6.773	-25.779	36.831	1.00	0.00
	ATOM	4359	HH12	ARG	1175	5.870	-24.633	35.902	1.00	0.00
	ATOM	4360	NH2	ARG	1175	5.419	-23.010	37.746	1.00	41.58
	ATOM	4361	HH21	ARG	1175	5.312	-22.413	38.541	1.00	0.00

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	ATOM	4362	HH22	ARG	1175	5.048	-22.735	36.860	1.00	0.00
	ATOM	4363	C	ARG	1175	12.139	-26.831	38.290	1.00	18.03
	ATOM	4364	O	ARG	1175	12.465	-27.951	38.681	1.00	19.18
	ATOM	4365	N	LYS	1176	12.646	-26.307	37.179	1.00	19.95
5	ATOM	4366	H	LYS	1176	12.409	-25.382	36.946	1.00	0.00
	ATOM	4367	CA	LYS	1176	13.523	-27.040	36.277	1.00	19.66
	ATOM	4368	CB	LYS	1176	13.704	-26.240	34.968	1.00	24.70
	ATOM	4369	CG	LYS	1176	14.239	-27.027	33.766	1.00	27.63
	ATOM	4370	CD	LYS	1176	13.192	-27.947	33.130	1.00	33.14
10	ATOM	4371	CE	LYS	1176	12.084	-27.187	32.375	1.00	32.52
	ATOM	4372	NZ	LYS	1176	11.254	-28.098	31.601	1.00	30.45
	ATOM	4373	HZ1	LYS	1176	10.824	-28.804	32.232	1.00	0.00
	ATOM	4374	HZ2	LYS	1176	11.850	-28.586	30.900	1.00	0.00
	ATOM	4375	HZ3	LYS	1176	10.508	-27.570	31.106	1.00	0.00
15	ATOM	4376	C	LYS	1176	14.866	-27.273	36.941	1.00	15.53
	ATOM	4377	O	LYS	1176	15.351	-28.400	36.968	1.00	18.60
	ATOM	4378	N	LEU	1177	15.433	-26.223	37.531	1.00	20.13
	ATOM	4379	H	LEU	1177	14.945	-25.377	37.490	1.00	0.00
	ATOM	4380	CA	LEU	1177	16.715	-26.242	38.225	1.00	18.75
20	ATOM	4381	CB	LEU	1177	17.004	-24.782	38.564	1.00	17.17
	ATOM	4382	CG	LEU	1177	18.184	-23.971	38.029	1.00	15.05
	ATOM	4383	CD1	LEU	1177	18.762	-24.564	36.777	1.00	13.44
	ATOM	4384	CD2	LEU	1177	17.697	-22.560	37.810	1.00	7.89
	ATOM	4385	C	LEU	1177	16.744	-27.158	39.461	1.00	17.88
25	ATOM	4386	O	LEU	1177	17.759	-27.761	39.804	1.00	16.88
	ATOM	4387	N	TYR	1178	15.637	-27.251	40.193	1.00	19.77
	ATOM	4388	H	TYR	1178	14.887	-26.668	39.963	1.00	0.00
	ATOM	4389	CA	TYR	1178	15.521	-28.151	41.329	1.00	24.93
	ATOM	4390	CB	TYR	1178	14.301	-27.775	42.188	1.00	22.12
30	ATOM	4391	CG	TYR	1178	14.517	-26.530	43.029	1.00	24.04
	ATOM	4392	CD1	TYR	1178	15.626	-26.436	43.875	1.00	25.26
	ATOM	4393	CE1	TYR	1178	15.821	-25.289	44.649	1.00	29.64
	ATOM	4394	CD2	TYR	1178	13.605	-25.479	42.958	1.00	20.32
	ATOM	4395	CE2	TYR	1178	13.795	-24.326	43.729	1.00	25.80
35	ATOM	4396	CZ	TYR	1178	14.906	-24.231	44.576	1.00	28.67
	ATOM	4397	OH	TYR	1178	15.105	-23.078	45.334	1.00	28.90
	ATOM	4398	HH	TYR	1178	14.279	-22.583	45.370	1.00	0.00
	ATOM	4399	C	TYR	1178	15.397	-29.624	40.939	1.00	27.89
	ATOM	4400	O	TYR	1178	15.565	-30.502	41.793	1.00	28.32

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	ATOM	4401	N	SER	1179	15.080	-29.931	39.671	1.00	30.11
	ATOM	4402	H	SER	1179	15.087	-29.234	38.985	1.00	0.00
	ATOM	4403	CA	SER	1179	14.933	-31.307	39.223	1.00	28.15
	ATOM	4404	CB	SER	1179	14.183	-31.423	37.897	1.00	28.43
5	ATOM	4405	OG	SER	1179	12.801	-31.106	38.019	1.00	41.75
	ATOM	4406	HG	SER	1179	12.751	-30.143	38.120	1.00	0.00
	ATOM	4407	C	SER	1179	16.303	-31.898	39.010	1.00	26.65
	ATOM	4408	O	SER	1179	17.190	-31.306	38.393	1.00	23.06
	ATOM	4409	N	GLY	1180	16.475	-33.096	39.533	1.00	24.46
10	ATOM	4410	H	GLY	1180	15.843	-33.441	40.193	1.00	0.00
	ATOM	4411	CA	GLY	1180	17.719	-33.778	39.337	1.00	24.52
	ATOM	4412	C	GLY	1180	18.692	-33.270	40.364	1.00	26.59
	ATOM	4413	O	GLY	1180	18.351	-32.970	41.505	1.00	27.29
	ATOM	4414	N	ALA	1181	19.879	-33.121	39.810	1.00	29.30
15	ATOM	4415	H	ALA	1181	19.932	-33.275	38.847	1.00	0.00
	ATOM	4416	CA	ALA	1181	21.082	-32.730	40.497	1.00	31.94
	ATOM	4417	CB	ALA	1181	22.129	-32.393	39.454	1.00	38.26
	ATOM	4418	C	ALA	1181	21.143	-31.629	41.539	1.00	33.00
	ATOM	4419	O	ALA	1181	21.590	-31.937	42.643	1.00	40.36
20	ATOM	4420	N	GLN	1182	20.762	-30.374	41.309	1.00	29.27
	ATOM	4421	H	GLN	1182	20.272	-30.169	40.490	1.00	0.00
	ATOM	4422	CA	GLN	1182	20.962	-29.298	42.309	1.00	28.61
	ATOM	4423	CB	GLN	1182	20.064	-29.532	43.545	1.00	23.51
	ATOM	4424	CG	GLN	1182	18.601	-29.269	43.273	1.00	29.62
25	ATOM	4425	CD	GLN	1182	17.692	-29.877	44.324	1.00	35.92
	ATOM	4426	OE1	GLN	1182	17.243	-29.245	45.289	1.00	37.09
	ATOM	4427	NE2	GLN	1182	17.413	-31.156	44.135	1.00	45.00
	ATOM	4428	HE21	GLN	1182	17.810	-31.600	43.352	1.00	0.00
	ATOM	4429	HE22	GLN	1182	16.769	-31.597	44.723	1.00	0.00
30	ATOM	4430	C	GLN	1182	22.417	-29.095	42.787	1.00	23.87
	ATOM	4431	O	GLN	1182	22.746	-28.817	43.947	1.00	22.97
	ATOM	4432	N	THR	1183	23.336	-29.158	41.837	1.00	18.65
	ATOM	4433	H	THR	1183	23.097	-29.276	40.898	1.00	0.00
	ATOM	4434	CA	THR	1183	24.738	-28.955	42.096	1.00	16.92
35	ATOM	4435	CB	THR	1183	25.517	-29.736	41.010	1.00	18.51
	ATOM	4436	OG1	THR	1183	24.892	-29.453	39.753	1.00	17.00
	ATOM	4437	HG1	THR	1183	25.621	-29.318	39.122	1.00	0.00
	ATOM	4438	CG2	THR	1183	25.531	-31.245	41.285	1.00	18.60
	ATOM	4439	C	THR	1183	25.053	-27.462	42.074	1.00	14.68

	ATOM	4440	O	THR	1183	24.370	-26.721	41.361	1.00	18.03
	ATOM	4441	N	ASP	1184	26.065	-26.961	42.779	1.00	13.66
	ATOM	4442	H	ASP	1184	26.579	-27.569	43.353	1.00	0.00
	ATOM	4443	CA	ASP	1184	26.404	-25.549	42.741	1.00	15.21
5	ATOM	4444	CB	ASP	1184	27.536	-25.242	43.695	1.00	10.46
	ATOM	4445	CG	ASP	1184	27.176	-25.188	45.170	1.00	12.60
	ATOM	4446	OD1	ASP	1184	28.084	-25.277	46.010	1.00	10.75
	ATOM	4447	OD2	ASP	1184	25.990	-25.054	45.471	1.00	12.16
	ATOM	4448	C	ASP	1184	26.828	-25.115	41.356	1.00	16.93
10	ATOM	4449	O	ASP	1184	27.602	-25.817	40.695	1.00	21.40
	ATOM	4450	N	GLY	1185	26.262	-23.997	40.918	1.00	14.05
	ATOM	4451	H	GLY	1185	25.633	-23.519	41.496	1.00	0.00
	ATOM	4452	CA	GLY	1185	26.561	-23.443	39.614	1.00	14.01
	ATOM	4453	C	GLY	1185	25.741	-24.063	38.499	1.00	15.04
15	ATOM	4454	O	GLY	1185	26.035	-23.832	37.331	1.00	13.07
	ATOM	4455	N	LYS	1186	24.734	-24.889	38.778	1.00	14.59
	ATOM	4456	H	LYS	1186	24.547	-25.122	39.711	1.00	0.00
	ATOM	4457	CA	LYS	1186	23.860	-25.398	37.737	1.00	14.21
	ATOM	4458	CB	LYS	1186	23.012	-26.505	38.326	1.00	12.61
20	ATOM	4459	CG	LYS	1186	22.022	-27.129	37.379	1.00	14.10
	ATOM	4460	CD	LYS	1186	21.252	-27.977	38.361	1.00	22.79
	ATOM	4461	CE	LYS	1186	20.043	-28.626	37.721	1.00	27.95
	ATOM	4462	NZ	LYS	1186	19.440	-29.535	38.677	1.00	30.90
	ATOM	4463	HZ1	LYS	1186	20.110	-30.295	38.908	1.00	0.00
25	ATOM	4464	HZ2	LYS	1186	18.582	-29.942	38.257	1.00	0.00
	ATOM	4465	HZ3	LYS	1186	19.194	-29.024	39.548	1.00	0.00
	ATOM	4466	C	LYS	1186	23.024	-24.186	37.303	1.00	14.69
	ATOM	4467	O	LYS	1186	22.539	-23.457	38.176	1.00	12.22
	ATOM	4468	N	PHE	1187	22.836	-23.931	36.007	1.00	11.37
30	ATOM	4469	H	PHE	1187	23.152	-24.577	35.337	1.00	0.00
	ATOM	4470	CA	PHE	1187	22.222	-22.688	35.554	1.00	11.00
	ATOM	4471	CB	PHE	1187	23.316	-21.609	35.354	1.00	3.59
	ATOM	4472	CG	PHE	1187	24.161	-21.823	34.092	1.00	10.48
	ATOM	4473	CD1	PHE	1187	23.895	-21.065	32.936	1.00	4.12
35	ATOM	4474	CD2	PHE	1187	25.167	-22.802	34.076	1.00	4.77
	ATOM	4475	CE1	PHE	1187	24.631	-21.297	31.788	1.00	2.00
	ATOM	4476	CE2	PHE	1187	25.904	-23.023	32.918	1.00	3.39
	ATOM	4477	CZ	PHE	1187	25.639	-22.275	31.776	1.00	2.00
	ATOM	4478	C	PHE	1187	21.441	-22.811	34.251	1.00	12.70

	ATOM	4479	O	PHE	1187	21.629	-23.757	33.469	1.00	14.29
	ATOM	4480	N	LEU	1188	20.617	-21.805	33.980	1.00	15.30
	ATOM	4481	H	LEU	1188	20.500	-21.083	34.639	1.00	0.00
	ATOM	4482	CA	LEU	1188	19.932	-21.659	32.705	1.00	13.51
5	ATOM	4483	CB	LEU	1188	18.537	-22.312	32.777	1.00	8.23
	ATOM	4484	CG	LEU	1188	17.434	-21.857	33.728	1.00	8.72
	ATOM	4485	CD1	LEU	1188	16.675	-20.662	33.151	1.00	6.00
	ATOM	4486	CD2	LEU	1188	16.444	-22.984	33.915	1.00	3.86
	ATOM	4487	C	LEU	1188	19.834	-20.148	32.432	1.00	17.33
10	ATOM	4488	O	LEU	1188	19.923	-19.356	33.384	1.00	16.73
	ATOM	4489	N	LEU	1189	19.732	-19.698	31.178	1.00	11.00
	ATOM	4490	H	LEU	1189	19.712	-20.341	30.439	1.00	0.00
	ATOM	4491	CA	LEU	1189	19.464	-18.312	30.886	1.00	8.88
	ATOM	4492	CB	LEU	1189	20.505	-17.760	29.951	1.00	9.47
15	ATOM	4493	CG	LEU	1189	20.749	-16.264	29.994	1.00	11.16
	ATOM	4494	CD1	LEU	1189	22.234	-15.989	29.946	1.00	14.98
	ATOM	4495	CD2	LEU	1189	20.093	-15.606	28.818	1.00	17.03
	ATOM	4496	C	LEU	1189	18.105	-18.311	30.221	1.00	10.34
	ATOM	4497	O	LEU	1189	17.787	-19.243	29.481	1.00	11.32
20	ATOM	4498	N	ARG	1190	17.268	-17.316	30.494	1.00	11.83
	ATOM	4499	H	ARG	1190	17.569	-16.616	31.112	1.00	0.00
	ATOM	4500	CA	ARG	1190	15.940	-17.192	29.930	1.00	12.55
	ATOM	4501	CB	ARG	1190	14.872	-17.742	30.924	1.00	10.80
	ATOM	4502	CG	ARG	1190	14.816	-16.996	32.246	1.00	16.94
25	ATOM	4503	CD	ARG	1190	13.866	-17.619	33.244	1.00	10.51
	ATOM	4504	NE	ARG	1190	14.272	-17.195	34.574	1.00	14.51
	ATOM	4505	HE	ARG	1190	14.905	-17.754	35.065	1.00	0.00
	ATOM	4506	CZ	ARG	1190	13.838	-16.071	35.155	1.00	11.97
	ATOM	4507	NH1	ARG	1190	12.979	-15.236	34.576	1.00	8.12
30	ATOM	4508	HH11	ARG	1190	12.632	-15.428	33.659	1.00	0.00
	ATOM	4509	HH12	ARG	1190	12.684	-14.419	35.066	1.00	0.00
	ATOM	4510	NH2	ARG	1190	14.356	-15.731	36.323	1.00	8.29
	ATOM	4511	HH21	ARG	1190	15.053	-16.316	36.734	1.00	0.00
	ATOM	4512	HH22	ARG	1190	14.070	-14.895	36.785	1.00	0.00
35	ATOM	4513	C	ARG	1190	15.654	-15.715	29.608	1.00	14.97
	ATOM	4514	O	ARG	1190	16.245	-14.815	30.226	1.00	15.61
	ATOM	4515	N	PRO	1191	14.809	-15.374	28.625	1.00	14.74
	ATOM	4516	CD	PRO	1191	14.125	-16.305	27.724	1.00	14.72
	ATOM	4517	CA	PRO	1191	14.427	-14.014	28.335	1.00	15.50

	ATOM	4518	CB	PRO	1191	13.942	-14.095	26.902	1.00	20.02
	ATOM	4519	CG	PRO	1191	13.230	-15.430	26.849	1.00	12.74
	ATOM	4520	C	PRO	1191	13.377	-13.599	29.354	1.00	17.84
	ATOM	4521	O	PRO	1191	12.559	-14.420	29.789	1.00	18.29
5	ATOM	4522	N	ARG	1192	13.392	-12.351	29.787	1.00	16.50
	ATOM	4523	H	ARG	1192	14.020	-11.697	29.417	1.00	0.00
	ATOM	4524	CA	ARG	1192	12.390	-11.919	30.731	1.00	19.93
	ATOM	4525	CB	ARG	1192	12.896	-10.822	31.655	1.00	16.49
	ATOM	4526	CG	ARG	1192	14.046	-11.166	32.595	1.00	10.36
10	ATOM	4527	CD	ARG	1192	14.060	-10.221	33.763	1.00	10.83
	ATOM	4528	NE	ARG	1192	14.004	-8.826	33.365	1.00	21.58
	ATOM	4529	HE	ARG	1192	14.571	-8.533	32.622	1.00	0.00
	ATOM	4530	CZ	ARG	1192	13.214	-7.909	33.937	1.00	17.94
	ATOM	4531	NH1	ARG	1192	12.378	-8.164	34.943	1.00	12.97
15	ATOM	4532	HH11	ARG	1192	12.311	-9.088	35.321	1.00	0.00
	ATOM	4533	HH12	ARG	1192	11.820	-7.426	35.322	1.00	0.00
	ATOM	4534	NH2	ARG	1192	13.296	-6.674	33.467	1.00	21.28
	ATOM	4535	HH21	ARG	1192	13.919	-6.471	32.711	1.00	0.00
	ATOM	4536	HH22	ARG	1192	12.741	-5.948	33.873	1.00	0.00
20	ATOM	4537	C	ARG	1192	11.241	-11.367	29.915	1.00	28.96
	ATOM	4538	O	ARG	1192	11.345	-11.120	28.703	1.00	32.17
	ATOM	4539	N	LYS	1193	10.133	-11.182	30.620	1.00	35.58
	ATOM	4540	H	LYS	1193	10.123	-11.503	31.549	1.00	0.00
	ATOM	4541	CA	LYS	1193	8.919	-10.627	30.059	1.00	39.90
25	ATOM	4542	CB	LYS	1193	7.862	-10.552	31.167	1.00	44.44
	ATOM	4543	CG	LYS	1193	8.242	-9.817	32.469	1.00	50.54
	ATOM	4544	CD	LYS	1193	7.395	-10.421	33.597	1.00	54.35
	ATOM	4545	CE	LYS	1193	7.441	-9.651	34.907	1.00	50.38
	ATOM	4546	NZ	LYS	1193	6.716	-8.403	34.764	1.00	50.92
30	ATOM	4547	HZ1	LYS	1193	5.768	-8.597	34.383	1.00	0.00
	ATOM	4548	HZ2	LYS	1193	7.230	-7.776	34.112	1.00	0.00
	ATOM	4549	HZ3	LYS	1193	6.627	-7.945	35.693	1.00	0.00
	ATOM	4550	C	LYS	1193	9.200	-9.258	29.465	1.00	42.01
	ATOM	4551	O	LYS	1193	8.681	-8.919	28.400	1.00	45.17
35	ATOM	4552	N	GLU	1194	10.063	-8.465	30.107	1.00	43.21
	ATOM	4553	H	GLU	1194	10.545	-8.826	30.876	1.00	0.00
	ATOM	4554	CA	GLU	1194	10.422	-7.154	29.598	1.00	42.46
	ATOM	4555	CB	GLU	1194	11.099	-6.342	30.699	1.00	45.15
	ATOM	4556	CG	GLU	1194	10.161	-6.091	31.888	1.00	51.05

	ATOM	4557	CD	GLU	1194	10.620	-5.135	32.997	1.00	54.40
	ATOM	4558	OE1	GLU	1194	11.621	-4.428	32.841	1.00	51.74
	ATOM	4559	OE2	GLU	1194	9.960	-5.106	34.040	1.00	53.43
	ATOM	4560	C	GLU	1194	11.374	-7.449	28.450	1.00	41.34
5	ATOM	4561	O	GLU	1194	12.396	-8.111	28.620	1.00	41.69
	ATOM	4562	N	GLN	1195	11.021	-7.015	27.252	1.00	41.74
	ATOM	4563	H	GLN	1195	10.212	-6.475	27.187	1.00	0.00
	ATOM	4564	CA	GLN	1195	11.787	-7.317	26.052	1.00	41.57
	ATOM	4565	CB	GLN	1195	10.993	-6.804	24.850	1.00	49.15
10	ATOM	4566	CG	GLN	1195	9.692	-7.586	24.621	1.00	57.96
	ATOM	4567	CD	GLN	1195	9.918	-9.056	24.262	1.00	62.70
	ATOM	4568	OE1	GLN	1195	10.451	-9.376	23.198	1.00	67.19
	ATOM	4569	NE2	GLN	1195	9.529	-10.002	25.108	1.00	63.28
	ATOM	4570	HE21	GLN	1195	9.110	-9.750	25.959	1.00	0.00
15	ATOM	4571	HE22	GLN	1195	9.686	-10.930	24.842	1.00	0.00
	ATOM	4572	C	GLN	1195	13.201	-6.763	26.036	1.00	36.58
	ATOM	4573	O	GLN	1195	13.410	-5.624	26.442	1.00	38.41
	ATOM	4574	N	GLY	1196	14.180	-7.567	25.631	1.00	33.45
	ATOM	4575	H	GLY	1196	13.953	-8.505	25.441	1.00	0.00
20	ATOM	4576	CA	GLY	1196	15.579	-7.149	25.576	1.00	27.92
	ATOM	4577	C	GLY	1196	16.373	-7.473	26.850	1.00	20.50
	ATOM	4578	O	GLY	1196	17.596	-7.331	26.896	1.00	17.86
	ATOM	4579	N	THR	1197	15.713	-7.930	27.912	1.00	21.77
	ATOM	4580	H	THR	1197	14.758	-8.129	27.852	1.00	0.00
25	ATOM	4581	CA	THR	1197	16.376	-8.267	29.151	1.00	15.76
	ATOM	4582	CB	THR	1197	15.701	-7.539	30.329	1.00	16.54
	ATOM	4583	OG1	THR	1197	14.355	-7.984	30.455	1.00	18.76
	ATOM	4584	HG1	THR	1197	13.876	-7.758	29.653	1.00	0.00
	ATOM	4585	CG2	THR	1197	15.758	-6.037	30.127	1.00	15.13
30	ATOM	4586	C	THR	1197	16.300	-9.769	29.328	1.00	16.59
	ATOM	4587	O	THR	1197	15.438	-10.452	28.738	1.00	17.00
	ATOM	4588	N	TYR	1198	17.204	-10.298	30.140	1.00	14.48
	ATOM	4589	H	TYR	1198	17.739	-9.719	30.720	1.00	0.00
	ATOM	4590	CA	TYR	1198	17.356	-11.719	30.325	1.00	16.70
35	ATOM	4591	CB	TYR	1198	18.556	-12.201	29.519	1.00	17.59
	ATOM	4592	CG	TYR	1198	18.374	-12.049	28.008	1.00	21.32
	ATOM	4593	CD1	TYR	1198	18.820	-10.906	27.326	1.00	16.75
	ATOM	4594	CE1	TYR	1198	18.609	-10.791	25.950	1.00	19.88
	ATOM	4595	CD2	TYR	1198	17.725	-13.072	27.304	1.00	25.15

	ATOM	4596	CE2	TYR	1198	17.509	-12.964	25.929	1.00	25.33
	ATOM	4597	CZ	TYR	1198	17.954	-11.824	25.263	1.00	26.49
	ATOM	4598	OH	TYR	1198	17.748	-11.741	23.894	1.00	36.63
	ATOM	4599	HH	TYR	1198	17.993	-10.861	23.598	1.00	0.00
5	ATOM	4600	C	TYR	1198	17.589	-11.975	31.791	1.00	14.67
	ATOM	4601	O	TYR	1198	18.007	-11.074	32.512	1.00	18.92
	ATOM	4602	N	ALA	1199	17.351	-13.168	32.283	1.00	12.49
	ATOM	4603	H	ALA	1199	17.003	-13.882	31.710	1.00	0.00
	ATOM	4604	CA	ALA	1199	17.694	-13.466	33.659	1.00	10.60
10	ATOM	4605	CB	ALA	1199	16.446	-13.646	34.500	1.00	3.99
	ATOM	4606	C	ALA	1199	18.501	-14.755	33.690	1.00	9.64
	ATOM	4607	O	ALA	1199	18.152	-15.740	33.036	1.00	11.40
	ATOM	4608	N	LEU	1200	19.653	-14.684	34.355	1.00	6.80
	ATOM	4609	H	LEU	1200	19.907	-13.807	34.720	1.00	0.00
15	ATOM	4610	CA	LEU	1200	20.499	-15.823	34.655	1.00	9.47
	ATOM	4611	CB	LEU	1200	21.895	-15.345	34.915	1.00	8.55
	ATOM	4612	CG	LEU	1200	23.093	-15.967	34.261	1.00	12.62
	ATOM	4613	CD1	LEU	1200	24.235	-15.618	35.215	1.00	4.18
	ATOM	4614	CD2	LEU	1200	22.921	-17.455	33.940	1.00	2.53
20	ATOM	4615	C	LEU	1200	19.975	-16.527	35.934	1.00	10.31
	ATOM	4616	O	LEU	1200	19.911	-15.893	37.002	1.00	9.18
	ATOM	4617	N	SER	1201	19.539	-17.787	35.929	1.00	8.80
	ATOM	4618	H	SER	1201	19.637	-18.340	35.125	1.00	0.00
	ATOM	4619	CA	SER	1201	19.073	-18.416	37.154	1.00	10.37
25	ATOM	4620	CB	SER	1201	17.702	-18.992	36.893	1.00	11.67
	ATOM	4621	OG	SER	1201	16.765	-17.981	36.540	1.00	13.11
	ATOM	4622	HG	SER	1201	17.018	-17.717	35.640	1.00	0.00
	ATOM	4623	C	SER	1201	20.091	-19.498	37.493	1.00	13.77
	ATOM	4624	O	SER	1201	20.425	-20.250	36.565	1.00	13.42
30	ATOM	4625	N	LEU	1202	20.600	-19.589	38.739	1.00	10.94
	ATOM	4626	H	LEU	1202	20.254	-19.000	39.443	1.00	0.00
	ATOM	4627	CA	LEU	1202	21.622	-20.553	39.113	1.00	10.67
	ATOM	4628	CB	LEU	1202	23.010	-19.859	39.184	1.00	16.39
	ATOM	4629	CG	LEU	1202	23.690	-19.359	40.485	1.00	15.58
35	ATOM	4630	CD1	LEU	1202	25.112	-19.872	40.531	1.00	18.14
	ATOM	4631	CD2	LEU	1202	23.778	-17.875	40.526	1.00	14.38
	ATOM	4632	C	LEU	1202	21.341	-21.242	40.449	1.00	11.37
	ATOM	4633	O	LEU	1202	20.596	-20.712	41.265	1.00	13.60
	ATOM	4634	N	ILE	1203	21.873	-22.422	40.728	1.00	13.31

	ATOM	4635	H	ILE	1203	22.435	-22.841	40.047	1.00	0.00
	ATOM	4636	CA	ILE	1203	21.704	-23.099	41.999	1.00	11.49
	ATOM	4637	CB	ILE	1203	21.585	-24.650	41.781	1.00	18.26
	ATOM	4638	CG2	ILE	1203	22.002	-25.404	43.049	1.00	15.92
5	ATOM	4639	CG1	ILE	1203	20.156	-25.035	41.396	1.00	20.04
	ATOM	4640	CD	ILE	1203	19.137	-25.145	42.573	1.00	21.80
	ATOM	4641	C	ILE	1203	22.939	-22.781	42.819	1.00	7.80
	ATOM	4642	O	ILE	1203	24.056	-22.800	42.305	1.00	10.96
	ATOM	4643	N	TYR	1204	22.777	-22.459	44.090	1.00	10.54
10	ATOM	4644	H	TYR	1204	21.887	-22.190	44.403	1.00	0.00
	ATOM	4645	CA	TYR	1204	23.881	-22.380	45.021	1.00	6.13
	ATOM	4646	CB	TYR	1204	24.481	-20.973	45.109	1.00	10.48
	ATOM	4647	CG	TYR	1204	25.533	-20.915	46.211	1.00	7.51
	ATOM	4648	CD1	TYR	1204	26.792	-21.469	45.978	1.00	2.91
15	ATOM	4649	CE1	TYR	1204	27.736	-21.503	47.007	1.00	6.56
	ATOM	4650	CD2	TYR	1204	25.219	-20.383	47.473	1.00	6.54
	ATOM	4651	CE2	TYR	1204	26.162	-20.425	48.499	1.00	4.63
	ATOM	4652	CZ	TYR	1204	27.407	-20.991	48.257	1.00	5.40
	ATOM	4653	OH	TYR	1204	28.302	-21.141	49.285	1.00	6.25
20	ATOM	4654	HH	TYR	1204	29.180	-20.904	48.957	1.00	0.00
	ATOM	4655	C	TYR	1204	23.203	-22.728	46.322	1.00	8.98
	ATOM	4656	O	TYR	1204	22.156	-22.157	46.640	1.00	9.89
	ATOM	4657	N	GLY	1205	23.708	-23.725	47.057	1.00	10.19
	ATOM	4658	H	GLY	1205	24.387	-24.311	46.661	1.00	0.00
25	ATOM	4659	CA	GLY	1205	23.143	-24.100	48.356	1.00	5.00
	ATOM	4660	C	GLY	1205	21.709	-24.580	48.227	1.00	9.19
	ATOM	4661	O	GLY	1205	20.825	-24.345	49.072	1.00	10.18
	ATOM	4662	N	LYS	1206	21.503	-25.225	47.068	1.00	8.86
	ATOM	4663	H	LYS	1206	22.286	-25.417	46.504	1.00	0.00
30	ATOM	4664	CA	LYS	1206	20.208	-25.701	46.603	1.00	4.66
	ATOM	4665	CB	LYS	1206	19.836	-26.968	47.357	1.00	6.05
	ATOM	4666	CG	LYS	1206	20.929	-28.011	47.201	1.00	4.25
	ATOM	4667	CD	LYS	1206	20.424	-29.318	47.766	1.00	10.92
	ATOM	4668	CE	LYS	1206	21.540	-30.357	47.758	1.00	10.58
35	ATOM	4669	NZ	LYS	1206	20.937	-31.658	47.933	1.00	19.07
	ATOM	4670	HZ1	LYS	1206	20.351	-31.871	47.101	1.00	0.00
	ATOM	4671	HZ2	LYS	1206	20.337	-31.657	48.783	1.00	0.00
	ATOM	4672	HZ3	LYS	1206	21.669	-32.389	48.030	1.00	0.00
	ATOM	4673	C	LYS	1206	19.114	-24.648	46.728	1.00	4.89

	ATOM	4674	O	LYS	1206	17.957	-24.880	47.090	1.00	7.21
	ATOM	4675	N	THR	1207	19.538	-23.433	46.388	1.00	8.77
	ATOM	4676	H	THR	1207	20.471	-23.265	46.151	1.00	0.00
	ATOM	4677	CA	THR	1207	18.654	-22.282	46.327	1.00	11.18
5	ATOM	4678	CB	THR	1207	18.993	-21.309	47.469	1.00	8.66
	ATOM	4679	OG1	THR	1207	19.044	-22.042	48.695	1.00	18.34
	ATOM	4680	HG1	THR	1207	19.657	-22.792	48.654	1.00	0.00
	ATOM	4681	CG2	THR	1207	17.935	-20.225	47.600	1.00	2.00
	ATOM	4682	C	THR	1207	18.933	-21.646	44.964	1.00	8.75
10	ATOM	4683	O	THR	1207	20.094	-21.520	44.566	1.00	11.11
	ATOM	4684	N	VAL	1208	17.897	-21.317	44.203	1.00	11.99
	ATOM	4685	H	VAL	1208	16.986	-21.474	44.529	1.00	0.00
	ATOM	4686	CA	VAL	1208	18.092	-20.657	42.924	1.00	11.25
	ATOM	4687	CB	VAL	1208	16.848	-20.878	42.006	1.00	13.46
15	ATOM	4688	CG1	VAL	1208	17.103	-20.322	40.612	1.00	10.87
	ATOM	4689	CG2	VAL	1208	16.583	-22.363	41.833	1.00	8.09
	ATOM	4690	C	VAL	1208	18.313	-19.169	43.185	1.00	9.93
	ATOM	4691	O	VAL	1208	17.641	-18.561	44.021	1.00	12.68
	ATOM	4692	N	TYR	1209	19.289	-18.559	42.538	1.00	10.99
20	ATOM	4693	H	TYR	1209	19.866	-19.105	41.961	1.00	0.00
	ATOM	4694	CA	TYR	1209	19.543	-17.127	42.598	1.00	9.13
	ATOM	4695	CB	TYR	1209	21.023	-16.904	42.917	1.00	7.91
	ATOM	4696	CG	TYR	1209	21.281	-17.214	44.376	1.00	13.41
	ATOM	4697	CD1	TYR	1209	21.096	-16.209	45.327	1.00	16.92
25	ATOM	4698	CE1	TYR	1209	21.199	-16.504	46.682	1.00	22.64
	ATOM	4699	CD2	TYR	1209	21.591	-18.512	44.783	1.00	13.00
	ATOM	4700	CE2	TYR	1209	21.691	-18.807	46.138	1.00	14.79
	ATOM	4701	CZ	TYR	1209	21.492	-17.805	47.080	1.00	18.04
	ATOM	4702	OH	TYR	1209	21.555	-18.089	48.425	1.00	16.55
30	ATOM	4703	HH	TYR	1209	21.525	-19.044	48.552	1.00	0.00
	ATOM	4704	C	TYR	1209	19.176	-16.557	41.227	1.00	9.15
	ATOM	4705	O	TYR	1209	19.307	-17.306	40.258	1.00	9.61
	ATOM	4706	N	HIS	1210	18.677	-15.326	41.036	1.00	9.91
	ATOM	4707	H	HIS	1210	18.622	-14.715	41.807	1.00	0.00
35	ATOM	4708	CA	HIS	1210	18.366	-14.805	39.699	1.00	7.08
	ATOM	4709	CB	HIS	1210	16.886	-14.536	39.478	1.00	9.03
	ATOM	4710	CG	HIS	1210	16.007	-15.770	39.564	1.00	8.44
	ATOM	4711	CD2	HIS	1210	15.433	-16.228	40.731	1.00	10.80
	ATOM	4712	ND1	HIS	1210	15.657	-16.621	38.613	1.00	11.46

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	ATOM	4713	HD1	HIS	1210	15.996	-16.657	37.689	1.00	0.00
	ATOM	4714	CE1	HIS	1210	14.908	-17.563	39.136	1.00	7.08
	ATOM	4715	NE2	HIS	1210	14.785	-17.314	40.416	1.00	10.12
	ATOM	4716	HE2	HIS	1210	14.360	-17.908	41.068	1.00	0.00
5	ATOM	4717	C	HIS	1210	19.057	-13.487	39.455	1.00	9.93
	ATOM	4718	O	HIS	1210	18.956	-12.579	40.269	1.00	8.85
	ATOM	4719	N	TYR	1211	19.794	-13.329	38.372	1.00	10.56
	ATOM	4720	H	TYR	1211	19.870	-14.074	37.737	1.00	0.00
	ATOM	4721	CA	TYR	1211	20.501	-12.089	38.069	1.00	14.64
10	ATOM	4722	CB	TYR	1211	21.990	-12.387	37.885	1.00	8.91
	ATOM	4723	CG	TYR	1211	22.642	-12.837	39.175	1.00	13.49
	ATOM	4724	CD1	TYR	1211	22.545	-14.176	39.587	1.00	11.64
	ATOM	4725	CE1	TYR	1211	23.138	-14.579	40.782	1.00	8.95
	ATOM	4726	CD2	TYR	1211	23.333	-11.897	39.950	1.00	10.65
15	ATOM	4727	CE2	TYR	1211	23.928	-12.305	41.144	1.00	8.87
	ATOM	4728	CZ	TYR	1211	23.829	-13.642	41.549	1.00	11.65
	ATOM	4729	OH	TYR	1211	24.419	-14.055	42.720	1.00	10.12
	ATOM	4730	HH	TYR	1211	24.763	-13.294	43.222	1.00	0.00
	ATOM	4731	C	TYR	1211	19.940	-11.461	36.795	1.00	12.65
20	ATOM	4732	O	TYR	1211	19.623	-12.200	35.866	1.00	15.74
	ATOM	4733	N	LEU	1212	19.779	-10.150	36.679	1.00	14.20
	ATOM	4734	H	LEU	1212	20.110	-9.570	37.399	1.00	0.00
	ATOM	4735	CA	LEU	1212	19.216	-9.514	35.488	1.00	13.88
	ATOM	4736	CB	LEU	1212	18.486	-8.205	35.850	1.00	17.25
25	ATOM	4737	CG	LEU	1212	17.893	-7.281	34.785	1.00	11.92
	ATOM	4738	CD1	LEU	1212	16.934	-8.055	33.937	1.00	15.10
	ATOM	4739	CD2	LEU	1212	17.122	-6.164	35.416	1.00	16.39
	ATOM	4740	C	LEU	1212	20.350	-9.193	34.556	1.00	11.08
	ATOM	4741	O	LEU	1212	21.414	-8.791	35.005	1.00	15.63
30	ATOM	4742	N	ILE	1213	20.155	-9.402	33.274	1.00	11.41
	ATOM	4743	H	ILE	1213	19.286	-9.744	32.985	1.00	0.00
	ATOM	4744	CA	ILE	1213	21.132	-9.052	32.258	1.00	11.27
	ATOM	4745	CB	ILE	1213	21.647	-10.301	31.495	1.00	10.65
	ATOM	4746	CG2	ILE	1213	22.612	-9.851	30.394	1.00	2.00
35	ATOM	4747	CG1	ILE	1213	22.333	-11.271	32.457	1.00	8.10
	ATOM	4748	CD	ILE	1213	22.178	-12.708	31.951	1.00	6.60
	ATOM	4749	C	ILE	1213	20.300	-8.185	31.319	1.00	12.26
	ATOM	4750	O	ILE	1213	19.143	-8.504	31.032	1.00	11.97
	ATOM	4751	N	SER	1214	20.850	-7.068	30.870	1.00	15.76

	ATOM	4752	H	SER	1214	21.733	-6.808	31.218	1.00	0.00
	ATOM	4753	CA	SER	1214	20.219	-6.188	29.898	1.00	11.43
	ATOM	4754	CB	SER	1214	19.346	-5.168	30.653	1.00	8.83
	ATOM	4755	OG	SER	1214	19.967	-4.636	31.807	1.00	13.26
5	ATOM	4756	HG	SER	1214	20.764	-4.188	31.502	1.00	0.00
	ATOM	4757	C	SER	1214	21.344	-5.515	29.112	1.00	12.87
	ATOM	4758	O	SER	1214	22.539	-5.704	29.420	1.00	9.60
	ATOM	4759	N	GLN	1215	21.012	-4.789	28.040	1.00	13.37
	ATOM	4760	H	GLN	1215	20.071	-4.719	27.781	1.00	0.00
10	ATOM	4761	CA	GLN	1215	22.007	-4.049	27.261	1.00	16.58
	ATOM	4762	CB	GLN	1215	21.641	-3.996	25.761	1.00	15.14
	ATOM	4763	CG	GLN	1215	21.706	-5.377	25.155	1.00	19.92
	ATOM	4764	CD	GLN	1215	21.354	-5.525	23.684	1.00	23.57
	ATOM	4765	OE1	GLN	1215	20.229	-5.858	23.301	1.00	25.08
15	ATOM	4766	NE2	GLN	1215	22.322	-5.400	22.793	1.00	24.06
	ATOM	4767	HE21	GLN	1215	23.233	-5.230	23.113	1.00	0.00
	ATOM	4768	HE22	GLN	1215	22.094	-5.496	21.847	1.00	0.00
	ATOM	4769	C	GLN	1215	22.069	-2.625	27.789	1.00	16.06
	ATOM	4770	O	GLN	1215	21.025	-2.008	28.024	1.00	19.32
20	ATOM	4771	N	ASP	1216	23.268	-2.124	28.048	1.00	17.64
	ATOM	4772	H	ASP	1216	24.038	-2.731	28.000	1.00	0.00
	ATOM	4773	CA	ASP	1216	23.475	-0.736	28.451	1.00	21.35
	ATOM	4774	CB	ASP	1216	24.925	-0.587	28.951	1.00	20.33
	ATOM	4775	CG	ASP	1216	26.085	-0.812	27.960	1.00	18.82
25	ATOM	4776	OD1	ASP	1216	25.889	-0.887	26.747	1.00	18.33
	ATOM	4777	OD2	ASP	1216	27.226	-0.886	28.401	1.00	15.08
	ATOM	4778	C	ASP	1216	23.211	0.206	27.275	1.00	22.60
	ATOM	4779	O	ASP	1216	23.013	-0.268	26.157	1.00	24.68
	ATOM	4780	N	LYS	1217	23.334	1.527	27.414	1.00	27.26
30	ATOM	4781	H	LYS	1217	23.459	1.868	28.323	1.00	0.00
	ATOM	4782	CA	LYS	1217	23.128	2.473	26.302	1.00	26.76
	ATOM	4783	CB	LYS	1217	23.521	3.892	26.747	1.00	28.33
	ATOM	4784	CG	LYS	1217	24.974	4.178	27.188	1.00	40.57
	ATOM	4785	CD	LYS	1217	25.357	3.646	28.595	1.00	49.59
35	ATOM	4786	CE	LYS	1217	26.753	4.133	28.992	1.00	51.93
	ATOM	4787	NZ	LYS	1217	27.053	3.846	30.383	1.00	52.30
	ATOM	4788	HZ1	LYS	1217	26.961	2.826	30.561	1.00	0.00
	ATOM	4789	HZ2	LYS	1217	26.396	4.369	31.000	1.00	0.00
	ATOM	4790	HZ3	LYS	1217	28.028	4.149	30.584	1.00	0.00

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	ATOM	4791	C	LYS	1217	23.856	2.171	24.973	1.00	23.75
	ATOM	4792	O	LYS	1217	23.414	2.526	23.881	1.00	22.76
	ATOM	4793	N	ALA	1218	24.992	1.488	25.066	1.00	19.56
	ATOM	4794	H	ALA	1218	25.278	1.175	25.942	1.00	0.00
5	ATOM	4795	CA	ALA	1218	25.789	1.160	23.913	1.00	18.97
	ATOM	4796	CB	ALA	1218	27.250	1.338	24.283	1.00	12.65
	ATOM	4797	C	ALA	1218	25.574	-0.245	23.355	1.00	20.40
	ATOM	4798	O	ALA	1218	26.304	-0.658	22.447	1.00	24.06
	ATOM	4799	N	GLY	1219	24.611	-1.018	23.852	1.00	17.93
10	ATOM	4800	H	GLY	1219	23.937	-0.641	24.458	1.00	0.00
	ATOM	4801	CA	GLY	1219	24.399	-2.368	23.337	1.00	18.40
	ATOM	4802	C	GLY	1219	25.163	-3.491	24.043	1.00	12.63
	ATOM	4803	O	GLY	1219	24.891	-4.659	23.791	1.00	14.94
	ATOM	4804	N	LYS	1220	26.090	-3.212	24.938	1.00	9.76
15	ATOM	4805	H	LYS	1220	26.312	-2.276	25.072	1.00	0.00
	ATOM	4806	CA	LYS	1220	26.804	-4.244	25.668	1.00	12.80
	ATOM	4807	CB	LYS	1220	28.063	-3.669	26.313	1.00	11.80
	ATOM	4808	CG	LYS	1220	29.005	-3.055	25.284	1.00	13.40
	ATOM	4809	CD	LYS	1220	30.498	-3.312	25.537	1.00	31.03
20	ATOM	4810	CE	LYS	1220	30.945	-4.758	25.267	1.00	36.30
	ATOM	4811	NZ	LYS	1220	32.384	-4.971	25.363	1.00	35.49
	ATOM	4812	HZ1	LYS	1220	32.708	-4.762	26.328	1.00	0.00
	ATOM	4813	HZ2	LYS	1220	32.874	-4.347	24.690	1.00	0.00
	ATOM	4814	HZ3	LYS	1220	32.599	-5.961	25.132	1.00	0.00
25	ATOM	4815	C	LYS	1220	25.940	-4.884	26.745	1.00	14.51
	ATOM	4816	O	LYS	1220	25.205	-4.205	27.477	1.00	15.43
	ATOM	4817	N	TYR	1221	25.990	-6.217	26.744	1.00	12.28
	ATOM	4818	H	TYR	1221	26.544	-6.646	26.066	1.00	0.00
	ATOM	4819	CA	TYR	1221	25.273	-7.069	27.673	1.00	10.89
30	ATOM	4820	CB	TYR	1221	25.187	-8.490	27.087	1.00	7.55
	ATOM	4821	CG	TYR	1221	24.259	-8.599	25.884	1.00	6.89
	ATOM	4822	CD1	TYR	1221	24.784	-8.501	24.600	1.00	5.33
	ATOM	4823	CE1	TYR	1221	23.964	-8.672	23.486	1.00	11.81
	ATOM	4824	CD2	TYR	1221	22.902	-8.856	26.051	1.00	10.91
35	ATOM	4825	CE2	TYR	1221	22.075	-9.031	24.930	1.00	9.53
	ATOM	4826	CZ	TYR	1221	22.612	-8.950	23.645	1.00	12.73
	ATOM	4827	OH	TYR	1221	21.836	-9.245	22.524	1.00	13.45
	ATOM	4828	HH	TYR	1221	21.836	-8.487	21.914	1.00	0.00
	ATOM	4829	C	TYR	1221	25.965	-7.106	29.035	1.00	9.20

	ATOM	4830	O	TYR	1221	27.197	-7.211	29.109	1.00	13.58
	ATOM	4831	N	CYS	1222	25.234	-6.957	30.127	1.00	8.73
	ATOM	4832	H	CYS	1222	24.293	-6.678	30.068	1.00	0.00
	ATOM	4833	CA	CYS	1222	25.842	-7.089	31.435	1.00	11.15
5	ATOM	4834	CB	CYS	1222	26.711	-5.878	31.730	1.00	13.63
	ATOM	4835	SG	CYS	1222	25.843	-4.300	31.769	1.00	15.70
	ATOM	4836	C	CYS	1222	24.800	-7.225	32.519	1.00	9.43
	ATOM	4837	O	CYS	1222	23.617	-6.955	32.302	1.00	13.63
	ATOM	4838	N	ILE	1223	25.180	-7.769	33.671	1.00	13.65
10	ATOM	4839	H	ILE	1223	26.097	-8.112	33.760	1.00	0.00
	ATOM	4840	CA	ILE	1223	24.318	-7.763	34.866	1.00	11.24
	ATOM	4841	CB	ILE	1223	24.724	-8.944	35.792	1.00	12.90
	ATOM	4842	CG2	ILE	1223	24.025	-8.884	37.166	1.00	8.32
	ATOM	4843	CG1	ILE	1223	24.377	-10.221	35.054	1.00	12.18
15	ATOM	4844	CD	ILE	1223	25.066	-11.480	35.556	1.00	14.74
	ATOM	4845	C	ILE	1223	24.614	-6.396	35.509	1.00	10.19
	ATOM	4846	O	ILE	1223	25.728	-5.880	35.285	1.00	9.63
	ATOM	4847	N	PRO	1224	23.748	-5.694	36.263	1.00	11.43
	ATOM	4848	CD	PRO	1224	22.306	-5.965	36.414	1.00	7.97
20	ATOM	4849	CA	PRO	1224	24.084	-4.405	36.834	1.00	7.55
	ATOM	4850	CB	PRO	1224	22.861	-4.093	37.629	1.00	9.42
	ATOM	4851	CG	PRO	1224	21.742	-4.611	36.743	1.00	3.67
	ATOM	4852	C	PRO	1224	25.385	-4.433	37.614	1.00	14.05
	ATOM	4853	O	PRO	1224	25.603	-5.267	38.490	1.00	18.66
25	ATOM	4854	N	GLU	1225	26.275	-3.545	37.179	1.00	13.58
	ATOM	4855	H	GLU	1225	26.005	-2.981	36.426	1.00	0.00
	ATOM	4856	CA	GLU	1225	27.633	-3.336	37.680	1.00	14.68
	ATOM	4857	CB	GLU	1225	27.681	-3.285	39.233	1.00	17.95
	ATOM	4858	CG	GLU	1225	26.836	-2.196	39.917	1.00	24.12
30	ATOM	4859	CD	GLU	1225	27.086	-0.782	39.391	1.00	31.41
	ATOM	4860	OE1	GLU	1225	28.228	-0.304	39.447	1.00	30.20
	ATOM	4861	OE2	GLU	1225	26.122	-0.169	38.917	1.00	36.60
	ATOM	4862	C	GLU	1225	28.603	-4.402	37.208	1.00	12.36
	ATOM	4863	O	GLU	1225	29.715	-4.474	37.705	1.00	10.48
35	ATOM	4864	N	GLY	1226	28.247	-5.202	36.203	1.00	15.65
	ATOM	4865	H	GLY	1226	27.411	-5.024	35.728	1.00	0.00
	ATOM	4866	CA	GLY	1226	29.065	-6.317	35.745	1.00	16.29
	ATOM	4867	C	GLY	1226	29.877	-6.033	34.498	1.00	14.66
	ATOM	4868	O	GLY	1226	29.805	-4.940	33.920	1.00	13.35

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	ATOM	4869	N	THR	1227	30.726	-7.018	34.159	1.00	15.24
	ATOM	4870	H	THR	1227	30.795	-7.807	34.735	1.00	0.00
	ATOM	4871	CA	THR	1227	31.568	-6.988	32.958	1.00	10.28
	ATOM	4872	CB	THR	1227	32.377	-8.293	32.879	1.00	9.42
5	ATOM	4873	OG1	THR	1227	33.033	-8.487	34.126	1.00	13.78
	ATOM	4874	HG1	THR	1227	33.642	-9.231	34.046	1.00	0.00
	ATOM	4875	CG2	THR	1227	33.443	-8.243	31.825	1.00	4.54
	ATOM	4876	C	THR	1227	30.659	-6.839	31.749	1.00	3.83
	ATOM	4877	O	THR	1227	29.553	-7.372	31.758	1.00	5.42
10	ATOM	4878	N	LYS	1228	31.095	-6.072	30.768	1.00	9.81
	ATOM	4879	H	LYS	1228	32.012	-5.718	30.808	1.00	0.00
	ATOM	4880	CA	LYS	1228	30.345	-5.772	29.551	1.00	11.73
	ATOM	4881	CB	LYS	1228	30.720	-4.416	28.983	1.00	11.23
	ATOM	4882	CG	LYS	1228	30.633	-3.200	29.882	1.00	10.19
15	ATOM	4883	CD	LYS	1228	29.203	-2.969	30.270	1.00	15.20
	ATOM	4884	CE	LYS	1228	29.100	-1.660	31.047	1.00	14.54
	ATOM	4885	NZ	LYS	1228	27.704	-1.421	31.359	1.00	16.02
	ATOM	4886	HZ1	LYS	1228	27.340	-2.244	31.880	1.00	0.00
	ATOM	4887	HZ2	LYS	1228	27.171	-1.309	30.473	1.00	0.00
20	ATOM	4888	HZ3	LYS	1228	27.599	-0.564	31.940	1.00	0.00
	ATOM	4889	C	LYS	1228	30.707	-6.795	28.493	1.00	8.65
	ATOM	4890	O	LYS	1228	31.897	-7.072	28.329	1.00	8.25
	ATOM	4891	N	PHE	1229	29.740	-7.331	27.756	1.00	7.57
	ATOM	4892	H	PHE	1229	28.806	-7.093	27.938	1.00	0.00
25	ATOM	4893	CA	PHE	1229	29.996	-8.334	26.722	1.00	11.09
	ATOM	4894	CB	PHE	1229	29.483	-9.753	27.086	1.00	6.70
	ATOM	4895	CG	PHE	1229	29.986	-10.207	28.450	1.00	7.81
	ATOM	4896	CD1	PHE	1229	29.251	-9.901	29.599	1.00	4.30
	ATOM	4897	CD2	PHE	1229	31.184	-10.912	28.546	1.00	5.18
30	ATOM	4898	CE1	PHE	1229	29.723	-10.303	30.841	1.00	4.39
	ATOM	4899	CE2	PHE	1229	31.642	-11.307	29.794	1.00	2.00
	ATOM	4900	CZ	PHE	1229	30.916	-11.005	30.936	1.00	2.00
	ATOM	4901	C	PHE	1229	29.243	-7.961	25.467	1.00	9.05
	ATOM	4902	O	PHE	1229	28.174	-7.361	25.535	1.00	6.36
35	ATOM	4903	N	ASP	1230	29.752	-8.369	24.316	1.00	11.64
	ATOM	4904	H	ASP	1230	30.616	-8.832	24.322	1.00	0.00
	ATOM	4905	CA	ASP	1230	29.041	-8.183	23.062	1.00	10.17
	ATOM	4906	CB	ASP	1230	29.961	-8.319	21.875	1.00	13.12
	ATOM	4907	CG	ASP	1230	30.845	-7.122	21.591	1.00	12.53

	ATOM	4908	OD1 ASP	1230	30.818	-6.121	22.303	1.00	18.42
	ATOM	4909	OD2 ASP	1230	31.566	-7.190	20.610	1.00	16.16
	ATOM	4910	C ASP	1230	27.944	-9.184	22.853	1.00	4.73
	ATOM	4911	O ASP	1230	26.995	-8.933	22.121	1.00	10.59
5	ATOM	4912	N THR	1231	28.020	-10.298	23.534	1.00	4.42
	ATOM	4913	H THR	1231	28.644	-10.378	24.281	1.00	0.00
	ATOM	4914	CA THR	1231	27.133	-11.398	23.265	1.00	8.22
	ATOM	4915	CB THR	1231	27.987	-12.342	22.365	1.00	10.46
	ATOM	4916	OG1 THR	1231	27.951	-11.835	21.031	1.00	16.76
10	ATOM	4917	HG1 THR	1231	28.848	-11.875	20.682	1.00	0.00
	ATOM	4918	CG2 THR	1231	27.455	-13.705	22.237	1.00	19.25
	ATOM	4919	C THR	1231	26.663	-12.002	24.573	1.00	7.92
	ATOM	4920	O THR	1231	27.349	-11.890	25.595	1.00	12.71
	ATOM	4921	N LEU	1232	25.496	-12.649	24.574	1.00	9.70
15	ATOM	4922	H LEU	1232	24.892	-12.549	23.803	1.00	0.00
	ATOM	4923	CA LEU	1232	25.040	-13.393	25.742	1.00	11.19
	ATOM	4924	CB LEU	1232	23.588	-13.738	25.630	1.00	6.17
	ATOM	4925	CG LEU	1232	22.651	-12.624	25.993	1.00	7.65
	ATOM	4926	CD1 LEU	1232	21.261	-13.177	25.824	1.00	10.36
20	ATOM	4927	CD2 LEU	1232	22.852	-12.135	27.444	1.00	6.21
	ATOM	4928	C LEU	1232	25.815	-14.682	25.902	1.00	11.62
	ATOM	4929	O LEU	1232	26.187	-15.071	27.019	1.00	11.82
	ATOM	4930	N TRP	1233	26.123	-15.312	24.760	1.00	9.01
	ATOM	4931	H TRP	1233	25.729	-14.988	23.927	1.00	0.00
25	ATOM	4932	CA TRP	1233	26.953	-16.503	24.740	1.00	7.78
	ATOM	4933	CB TRP	1233	27.308	-16.919	23.298	1.00	6.14
	ATOM	4934	CG TRP	1233	27.978	-18.285	23.197	1.00	2.05
	ATOM	4935	CD2 TRP	1233	29.323	-18.581	23.221	1.00	2.00
	ATOM	4936	CE2 TRP	1233	29.292	-19.979	23.111	1.00	2.00
30	ATOM	4937	CE3 TRP	1233	30.547	-17.921	23.315	1.00	2.00
	ATOM	4938	CD1 TRP	1233	27.191	-19.400	23.080	1.00	2.03
	ATOM	4939	NE1 TRP	1233	28.021	-20.410	23.028	1.00	6.75
	ATOM	4940	HE1 TRP	1233	27.741	-21.338	22.871	1.00	0.00
	ATOM	4941	CZ2 TRP	1233	30.463	-20.727	23.097	1.00	2.00
35	ATOM	4942	CZ3 TRP	1233	31.728	-18.659	23.305	1.00	5.65
	ATOM	4943	CH2 TRP	1233	31.685	-20.056	23.196	1.00	8.83
	ATOM	4944	C TRP	1233	28.248	-16.248	25.501	1.00	6.51
	ATOM	4945	O TRP	1233	28.604	-16.992	26.411	1.00	8.36
	ATOM	4946	N GLN	1234	28.927	-15.161	25.118	1.00	6.74

	ATOM	4947	H	GLN	1234	28.578	-14.655	24.365	1.00	0.00
	ATOM	4948	CA	GLN	1234	30.182	-14.723	25.713	1.00	6.24
	ATOM	4949	CB	GLN	1234	30.769	-13.507	24.949	1.00	6.13
	ATOM	4950	CG	GLN	1234	31.525	-13.836	23.664	1.00	7.76
5	ATOM	4951	CD	GLN	1234	31.929	-12.648	22.780	1.00	12.06
	ATOM	4952	OE1	GLN	1234	31.120	-11.778	22.460	1.00	11.95
	ATOM	4953	NE2	GLN	1234	33.160	-12.557	22.297	1.00	8.30
	ATOM	4954	HE21	GLN	1234	33.803	-13.271	22.504	1.00	0.00
	ATOM	4955	HE22	GLN	1234	33.377	-11.805	21.722	1.00	0.00
10	ATOM	4956	C	GLN	1234	30.026	-14.340	27.182	1.00	5.81
	ATOM	4957	O	GLN	1234	30.995	-14.494	27.937	1.00	7.22
	ATOM	4958	N	LEU	1235	28.850	-13.859	27.606	1.00	4.55
	ATOM	4959	H	LEU	1235	28.120	-13.713	26.974	1.00	0.00
	ATOM	4960	CA	LEU	1235	28.597	-13.569	28.994	1.00	8.63
15	ATOM	4961	CB	LEU	1235	27.231	-12.857	29.140	1.00	9.71
	ATOM	4962	CG	LEU	1235	26.722	-12.482	30.569	1.00	7.20
	ATOM	4963	CD1	LEU	1235	25.924	-11.192	30.485	1.00	2.81
	ATOM	4964	CD2	LEU	1235	25.848	-13.594	31.163	1.00	6.19
	ATOM	4965	C	LEU	1235	28.625	-14.879	29.772	1.00	9.27
20	ATOM	4966	O	LEU	1235	29.360	-14.988	30.753	1.00	10.18
	ATOM	4967	N	VAL	1236	27.889	-15.910	29.353	1.00	12.76
	ATOM	4968	H	VAL	1236	27.318	-15.788	28.566	1.00	0.00
	ATOM	4969	CA	VAL	1236	27.901	-17.188	30.044	1.00	11.18
	ATOM	4970	CB	VAL	1236	26.875	-18.083	29.370	1.00	6.81
25	ATOM	4971	CG1	VAL	1236	27.052	-19.548	29.745	1.00	4.71
	ATOM	4972	CG2	VAL	1236	25.526	-17.624	29.837	1.00	2.00
	ATOM	4973	C	VAL	1236	29.293	-17.815	30.042	1.00	12.39
	ATOM	4974	O	VAL	1236	29.800	-18.173	31.112	1.00	16.48
	ATOM	4975	N	GLU	1237	29.966	-17.869	28.888	1.00	7.45
30	ATOM	4976	H	GLU	1237	29.542	-17.501	28.083	1.00	0.00
	ATOM	4977	CA	GLU	1237	31.285	-18.450	28.794	1.00	5.69
	ATOM	4978	CB	GLU	1237	31.731	-18.299	27.366	1.00	12.37
	ATOM	4979	CG	GLU	1237	32.556	-19.469	26.872	1.00	21.76
	ATOM	4980	CD	GLU	1237	31.960	-20.854	27.108	1.00	21.61
35	ATOM	4981	OE1	GLU	1237	32.730	-21.731	27.468	1.00	29.48
	ATOM	4982	OE2	GLU	1237	30.754	-21.067	26.960	1.00	24.95
	ATOM	4983	C	GLU	1237	32.303	-17.857	29.750	1.00	9.53
	ATOM	4984	O	GLU	1237	33.099	-18.560	30.379	1.00	8.53
	ATOM	4985	N	TYR	1238	32.261	-16.545	29.937	1.00	11.77

	ATOM	4986	H	TYR	1238	31.610	-16.008	29.438	1.00	0.00
	ATOM	4987	CA	TYR	1238	33.181	-15.884	30.855	1.00	12.69
	ATOM	4988	CB	TYR	1238	33.102	-14.389	30.537	1.00	11.45
	ATOM	4989	CG	TYR	1238	34.083	-13.475	31.255	1.00	10.47
5	ATOM	4990	CD1	TYR	1238	35.341	-13.231	30.706	1.00	9.86
	ATOM	4991	CE1	TYR	1238	36.222	-12.369	31.370	1.00	13.93
	ATOM	4992	CD2	TYR	1238	33.714	-12.862	32.460	1.00	8.70
	ATOM	4993	CE2	TYR	1238	34.589	-12.001	33.122	1.00	7.89
	ATOM	4994	CZ	TYR	1238	35.840	-11.757	32.571	1.00	11.90
10	ATOM	4995	OH	TYR	1238	36.698	-10.874	33.204	1.00	16.71
	ATOM	4996	HH	TYR	1238	37.612	-11.155	33.062	1.00	0.00
	ATOM	4997	C	TYR	1238	32.828	-16.208	32.320	1.00	11.56
	ATOM	4998	O	TYR	1238	33.719	-16.478	33.140	1.00	13.31
	ATOM	4999	N	LEU	1239	31.544	-16.300	32.689	1.00	10.97
15	ATOM	5000	H	LEU	1239	30.845	-16.189	32.007	1.00	0.00
	ATOM	5001	CA	LEU	1239	31.164	-16.540	34.075	1.00	7.36
	ATOM	5002	CB	LEU	1239	29.747	-16.092	34.317	1.00	5.23
	ATOM	5003	CG	LEU	1239	29.391	-14.668	33.989	1.00	9.04
	ATOM	5004	CD1	LEU	1239	27.892	-14.500	34.192	1.00	7.48
20	ATOM	5005	CD2	LEU	1239	30.230	-13.709	34.820	1.00	9.75
	ATOM	5006	C	LEU	1239	31.285	-17.990	34.484	1.00	6.04
	ATOM	5007	O	LEU	1239	31.016	-18.368	35.620	1.00	9.78
	ATOM	5008	N	LYS	1240	31.625	-18.847	33.532	1.00	10.64
	ATOM	5009	H	LYS	1240	31.561	-18.558	32.596	1.00	0.00
25	ATOM	5010	CA	LYS	1240	31.970	-20.225	33.816	1.00	9.28
	ATOM	5011	CB	LYS	1240	31.917	-21.088	32.558	1.00	3.87
	ATOM	5012	CG	LYS	1240	30.545	-21.458	32.032	1.00	4.02
	ATOM	5013	CD	LYS	1240	30.731	-22.176	30.691	1.00	8.38
	ATOM	5014	CE	LYS	1240	29.404	-22.644	30.101	1.00	11.25
30	ATOM	5015	NZ	LYS	1240	29.581	-23.179	28.763	1.00	17.56
	ATOM	5016	HZ1	LYS	1240	30.253	-23.972	28.793	1.00	0.00
	ATOM	5017	HZ2	LYS	1240	29.957	-22.435	28.144	1.00	0.00
	ATOM	5018	HZ3	LYS	1240	28.667	-23.511	28.392	1.00	0.00
	ATOM	5019	C	LYS	1240	33.399	-20.241	34.343	1.00	14.71
35	ATOM	5020	O	LYS	1240	33.787	-21.138	35.094	1.00	21.55
	ATOM	5021	N	LEU	1241	34.217	-19.259	33.962	1.00	13.94
	ATOM	5022	H	LEU	1241	33.862	-18.519	33.428	1.00	0.00
	ATOM	5023	CA	LEU	1241	35.600	-19.248	34.355	1.00	14.58
	ATOM	5024	CB	LEU	1241	36.457	-18.634	33.282	1.00	22.23

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	ATOM	5025	CG	LEU	1241	36.223	-18.933	31.805	1.00	31.30
	ATOM	5026	CD1	LEU	1241	37.045	-17.959	30.950	1.00	30.14
	ATOM	5027	CD2	LEU	1241	36.540	-20.398	31.541	1.00	28.41
	ATOM	5028	C	LEU	1241	35.805	-18.442	35.625	1.00	18.17
5	ATOM	5029	O	LEU	1241	36.656	-18.766	36.475	1.00	19.31
	ATOM	5030	N	LYS	1242	35.110	-17.310	35.729	1.00	18.52
	ATOM	5031	H	LYS	1242	34.467	-17.041	35.035	1.00	0.00
	ATOM	5032	CA	LYS	1242	35.258	-16.445	36.891	1.00	18.29
	ATOM	5033	CB	LYS	1242	36.053	-15.163	36.596	1.00	17.78
10	ATOM	5034	CG	LYS	1242	37.404	-15.288	35.877	1.00	20.93
	ATOM	5035	CD	LYS	1242	37.182	-15.155	34.356	1.00	26.47
	ATOM	5036	CE	LYS	1242	38.487	-15.277	33.558	1.00	28.84
	ATOM	5037	NZ	LYS	1242	39.399	-14.166	33.786	1.00	31.56
	ATOM	5038	HZ1	LYS	1242	39.650	-14.113	34.794	1.00	0.00
15	ATOM	5039	HZ2	LYS	1242	38.931	-13.284	33.496	1.00	0.00
	ATOM	5040	HZ3	LYS	1242	40.258	-14.304	33.217	1.00	0.00
	ATOM	5041	C	LYS	1242	33.857	-16.045	37.277	1.00	14.54
	ATOM	5042	O	LYS	1242	33.082	-15.650	36.417	1.00	14.69
	ATOM	5043	N	ALA	1243	33.500	-16.159	38.560	1.00	16.03
20	ATOM	5044	H	ALA	1243	34.150	-16.545	39.191	1.00	0.00
	ATOM	5045	CA	ALA	1243	32.167	-15.817	39.016	1.00	10.30
	ATOM	5046	CB	ALA	1243	32.002	-16.130	40.481	1.00	10.45
	ATOM	5047	C	ALA	1243	31.876	-14.351	38.822	1.00	11.11
	ATOM	5048	O	ALA	1243	30.729	-13.955	38.615	1.00	18.39
25	ATOM	5049	N	ASP	1244	32.901	-13.511	38.964	1.00	13.67
	ATOM	5050	H	ASP	1244	33.748	-13.880	39.280	1.00	0.00
	ATOM	5051	CA	ASP	1244	32.808	-12.097	38.658	1.00	12.02
	ATOM	5052	CB	ASP	1244	32.796	-12.085	37.119	1.00	17.69
	ATOM	5053	CG	ASP	1244	32.791	-10.744	36.408	1.00	21.88
30	ATOM	5054	OD1	ASP	1244	32.043	-10.598	35.445	1.00	22.59
	ATOM	5055	OD2	ASP	1244	33.537	-9.863	36.812	1.00	16.27
	ATOM	5056	C	ASP	1244	31.633	-11.379	39.334	1.00	11.11
	ATOM	5057	O	ASP	1244	30.905	-10.591	38.733	1.00	12.88
	ATOM	5058	N	GLY	1245	31.431	-11.645	40.623	1.00	11.66
35	ATOM	5059	H	GLY	1245	32.035	-12.271	41.067	1.00	0.00
	ATOM	5060	CA	GLY	1245	30.360	-11.041	41.394	1.00	4.05
	ATOM	5061	C	GLY	1245	29.186	-11.970	41.654	1.00	6.06
	ATOM	5062	O	GLY	1245	28.328	-11.641	42.478	1.00	4.56
	ATOM	5063	N	LEU	1246	29.027	-13.078	40.924	1.00	6.26

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	ATOM	5064	H	LEU	1246	29.670	-13.274	40.209	1.00	0.00
	ATOM	5065	CA	LEU	1246	27.937	-14.037	41.135	1.00	8.93
	ATOM	5066	CB	LEU	1246	27.839	-15.104	40.061	1.00	5.31
	ATOM	5067	CG	LEU	1246	27.674	-14.752	38.606	1.00	5.46
5	ATOM	5068	CD1	LEU	1246	27.924	-16.009	37.796	1.00	2.14
	ATOM	5069	CD2	LEU	1246	26.331	-14.139	38.380	1.00	2.00
	ATOM	5070	C	LEU	1246	28.187	-14.819	42.407	1.00	11.01
	ATOM	5071	O	LEU	1246	29.351	-14.975	42.786	1.00	13.17
	ATOM	5072	N	ILE	1247	27.168	-15.397	43.047	1.00	11.83
10	ATOM	5073	H	ILE	1247	26.238	-15.238	42.765	1.00	0.00
	ATOM	5074	CA	ILE	1247	27.449	-16.185	44.231	1.00	12.55
	ATOM	5075	CB	ILE	1247	26.078	-16.432	44.900	1.00	11.32
	ATOM	5076	CG2	ILE	1247	25.248	-17.439	44.094	1.00	11.69
	ATOM	5077	CG1	ILE	1247	26.338	-16.845	46.362	1.00	4.92
15	ATOM	5078	CD	ILE	1247	25.094	-16.664	47.211	1.00	2.58
	ATOM	5079	C	ILE	1247	28.257	-17.473	43.954	1.00	16.34
	ATOM	5080	O	ILE	1247	28.851	-18.047	44.880	1.00	13.40
	ATOM	5081	N	TYR	1248	28.363	-17.894	42.676	1.00	15.02
	ATOM	5082	H	TYR	1248	27.947	-17.387	41.950	1.00	0.00
20	ATOM	5083	CA	TYR	1248	29.092	-19.088	42.274	1.00	12.39
	ATOM	5084	CB	TYR	1248	28.289	-20.366	42.625	1.00	9.23
	ATOM	5085	CG	TYR	1248	29.191	-21.564	42.880	1.00	8.97
	ATOM	5086	CD1	TYR	1248	29.429	-22.516	41.885	1.00	10.00
	ATOM	5087	CE1	TYR	1248	30.306	-23.572	42.130	1.00	8.55
25	ATOM	5088	CD2	TYR	1248	29.824	-21.676	44.119	1.00	9.95
	ATOM	5089	CE2	TYR	1248	30.701	-22.732	44.368	1.00	6.09
	ATOM	5090	CZ	TYR	1248	30.935	-23.669	43.374	1.00	3.83
	ATOM	5091	OH	TYR	1248	31.815	-24.695	43.637	1.00	12.23
	ATOM	5092	HH	TYR	1248	31.879	-25.262	42.861	1.00	0.00
30	ATOM	5093	C	TYR	1248	29.277	-19.017	40.768	1.00	11.96
	ATOM	5094	O	TYR	1248	28.492	-18.350	40.093	1.00	10.19
	ATOM	5095	N	CYS	1249	30.301	-19.689	40.247	1.00	12.38
	ATOM	5096	H	CYS	1249	30.939	-20.117	40.855	1.00	0.00
	ATOM	5097	CA	CYS	1249	30.535	-19.856	38.815	1.00	17.03
35	ATOM	5098	CB	CYS	1249	31.812	-20.599	38.512	1.00	14.50
	ATOM	5099	SG	CYS	1249	33.232	-19.521	38.611	1.00	29.55
	ATOM	5100	C	CYS	1249	29.460	-20.670	38.127	1.00	14.34
	ATOM	5101	O	CYS	1249	28.821	-21.562	38.699	1.00	15.48
	ATOM	5102	N	LEU	1250	29.284	-20.385	36.853	1.00	13.47

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	ATOM	5103	H	LEU	1250	29.860	-19.715	36.427	1.00	0.00
	ATOM	5104	CA	LEU	1250	28.363	-21.157	36.061	1.00	14.95
	ATOM	5105	CB	LEU	1250	28.039	-20.406	34.787	1.00	7.93
	ATOM	5106	CG	LEU	1250	27.434	-19.026	34.950	1.00	3.87
5	ATOM	5107	CD1	LEU	1250	26.912	-18.579	33.605	1.00	2.00
	ATOM	5108	CD2	LEU	1250	26.318	-19.043	35.979	1.00	8.53
	ATOM	5109	C	LEU	1250	29.134	-22.439	35.790	1.00	15.93
	ATOM	5110	O	LEU	1250	30.301	-22.424	35.407	1.00	19.86
	ATOM	5111	N	LYS	1251	28.504	-23.545	36.126	1.00	17.94
10	ATOM	5112	H	LYS	1251	27.570	-23.472	36.389	1.00	0.00
	ATOM	5113	CA	LYS	1251	29.104	-24.851	36.032	1.00	21.49
	ATOM	5114	CB	LYS	1251	29.070	-25.527	37.415	1.00	19.69
	ATOM	5115	CG	LYS	1251	30.428	-25.703	38.058	1.00	24.61
	ATOM	5116	CD	LYS	1251	31.108	-24.378	38.326	1.00	26.63
15	ATOM	5117	CE	LYS	1251	32.563	-24.607	38.683	1.00	32.65
	ATOM	5118	NZ	LYS	1251	32.687	-25.364	39.912	1.00	38.55
	ATOM	5119	HZ1	LYS	1251	32.281	-26.314	39.795	1.00	0.00
	ATOM	5120	HZ2	LYS	1251	32.183	-24.861	40.672	1.00	0.00
	ATOM	5121	HZ3	LYS	1251	33.692	-25.446	40.160	1.00	0.00
20	ATOM	5122	C	LYS	1251	28.355	-25.684	35.012	1.00	21.80
	ATOM	5123	O	LYS	1251	28.712	-25.723	33.829	1.00	26.89
	ATOM	5124	N	GLU	1252	27.241	-26.266	35.447	1.00	18.32
	ATOM	5125	H	GLU	1252	26.845	-25.961	36.290	1.00	0.00
	ATOM	5126	CA	GLU	1252	26.502	-27.236	34.685	1.00	16.59
25	ATOM	5127	CB	GLU	1252	26.147	-28.341	35.653	1.00	24.16
	ATOM	5128	CG	GLU	1252	25.066	-29.361	35.347	1.00	37.83
	ATOM	5129	CD	GLU	1252	24.682	-30.193	36.571	1.00	46.82
	ATOM	5130	OE1	GLU	1252	25.571	-30.646	37.298	1.00	52.14
	ATOM	5131	OE2	GLU	1252	23.487	-30.392	36.804	1.00	53.93
30	ATOM	5132	C	GLU	1252	25.294	-26.579	34.093	1.00	15.45
	ATOM	5133	O	GLU	1252	24.542	-25.938	34.821	1.00	12.45
	ATOM	5134	N	ALA	1253	25.134	-26.714	32.776	1.00	15.62
	ATOM	5135	H	ALA	1253	25.821	-27.186	32.272	1.00	0.00
	ATOM	5136	CA	ALA	1253	23.974	-26.228	32.050	1.00	12.65
35	ATOM	5137	CB	ALA	1253	24.130	-26.360	30.548	1.00	5.87
	ATOM	5138	C	ALA	1253	22.785	-27.080	32.420	1.00	14.00
	ATOM	5139	O	ALA	1253	22.886	-28.304	32.502	1.00	17.74
	ATOM	5140	N	CYS	1254	21.668	-26.433	32.709	1.00	16.80
	ATOM	5141	H	CYS	1254	21.680	-25.457	32.687	1.00	0.00

	ATOM	5142	CA	CYS	1254	20.428	-27.114	32.952	1.00	14.88
	ATOM	5143	CB	CYS	1254	19.533	-26.275	33.838	1.00	7.31
	ATOM	5144	SG	CYS	1254	17.934	-27.060	34.181	1.00	11.48
	ATOM	5145	C	CYS	1254	19.843	-27.234	31.545	1.00	19.32
5	ATOM	5146	O	CYS	1254	19.494	-26.207	30.956	1.00	20.54
	ATOM	5147	N	PRO	1255	19.737	-28.427	30.937	1.00	24.66
	ATOM	5148	CD	PRO	1255	19.747	-29.716	31.620	1.00	23.90
	ATOM	5149	CA	PRO	1255	19.454	-28.617	29.522	1.00	25.94
	ATOM	5150	CB	PRO	1255	19.916	-30.024	29.277	1.00	25.59
10	ATOM	5151	CG	PRO	1255	19.392	-30.703	30.520	1.00	25.86
	ATOM	5152	C	PRO	1255	17.998	-28.370	29.178	1.00	27.93
	ATOM	5153	O	PRO	1255	17.101	-28.478	30.031	1.00	28.94
	ATOM	5154	N	ASN	1256	17.819	-27.884	27.961	1.00	33.02
	ATOM	5155	H	ASN	1256	18.564	-27.819	27.329	1.00	0.00
15	ATOM	5156	CA	ASN	1256	16.494	-27.679	27.418	1.00	36.15
	ATOM	5157	CB	ASN	1256	16.500	-26.480	26.412	1.00	40.46
	ATOM	5158	CG	ASN	1256	17.538	-26.371	25.280	1.00	43.38
	ATOM	5159	OD1	ASN	1256	18.465	-27.162	25.085	1.00	49.15
	ATOM	5160	ND2	ASN	1256	17.492	-25.289	24.509	1.00	47.41
20	ATOM	5161	HD21	ASN	1256	16.828	-24.602	24.706	1.00	0.00
	ATOM	5162	HD22	ASN	1256	18.165	-25.229	23.805	1.00	0.00
	ATOM	5163	C	ASN	1256	16.026	-28.969	26.747	1.00	37.74
	ATOM	5164	O	ASN	1256	14.817	-29.127	26.588	1.00	40.27
	ATOM	5165	OT	ASN	1256	16.858	-29.832	26.440	1.00	37.85
25	ATOM	5166	CB	ASN	1301	9.323	-7.474	39.011	1.00	72.83
	ATOM	5167	CG	ASN	1301	8.164	-8.460	38.892	1.00	75.21
	ATOM	5168	OD1	ASN	1301	8.313	-9.453	38.175	1.00	77.67
	ATOM	5169	ND2	ASN	1301	7.018	-8.265	39.523	1.00	73.86
	ATOM	5170	HD21	ASN	1301	6.864	-7.453	40.049	1.00	0.00
30	ATOM	5171	HD22	ASN	1301	6.359	-8.991	39.479	1.00	0.00
	ATOM	5172	C	ASN	1301	10.948	-9.156	40.037	1.00	69.93
	ATOM	5173	O	ASN	1301	11.680	-10.106	39.751	1.00	71.07
	ATOM	5174	HT1	ASN	1301	10.055	-9.516	37.599	1.00	0.00
	ATOM	5175	HT2	ASN	1301	11.673	-9.582	37.951	1.00	0.00
35	ATOM	5176	N	ASN	1301	10.898	-8.913	37.721	1.00	71.59
	ATOM	5177	HT3	ASN	1301	11.124	-8.372	36.873	1.00	0.00
	ATOM	5178	CA	ASN	1301	10.741	-8.118	38.933	1.00	71.90
	ATOM	5179	N	GLN	1302	10.329	-9.121	41.226	1.00	66.66
	ATOM	5180	H	GLN	1302	9.648	-8.440	41.394	1.00	0.00

	ATOM	5181	CA	GLN	1302	10.602	-10.013	42.356	1.00	61.49
	ATOM	5182	CB	GLN	1302	10.414	-11.513	41.988	1.00	62.07
	ATOM	5183	CG	GLN	1302	9.203	-11.902	41.135	1.00	62.59
	ATOM	5184	CD	GLN	1302	7.876	-11.373	41.651	1.00	64.61
5	ATOM	5185	OE1	GLN	1302	7.588	-10.173	41.632	1.00	60.30
	ATOM	5186	NE2	GLN	1302	7.015	-12.263	42.117	1.00	66.75
	ATOM	5187	HE21	GLN	1302	7.256	-13.211	42.101	1.00	0.00
	ATOM	5188	HE22	GLN	1302	6.171	-11.916	42.471	1.00	0.00
	ATOM	5189	C	GLN	1302	12.043	-9.756	42.803	1.00	56.80
10	ATOM	5190	O	GLN	1302	12.552	-8.645	42.573	1.00	58.90
	ATOM	5191	N	LEU	1303	12.761	-10.678	43.432	1.00	49.38
	ATOM	5192	H	LEU	1303	12.476	-11.612	43.456	1.00	0.00
	ATOM	5193	CA	LEU	1303	14.082	-10.350	43.932	1.00	43.43
	ATOM	5194	CB	LEU	1303	14.394	-11.073	45.273	1.00	51.18
15	ATOM	5195	CG	LEU	1303	13.555	-11.102	46.592	1.00	54.39
	ATOM	5196	CD1	LEU	1303	13.147	-9.676	46.963	1.00	55.27
	ATOM	5197	CD2	LEU	1303	12.345	-12.030	46.439	1.00	52.47
	ATOM	5198	C	LEU	1303	15.145	-10.760	42.930	1.00	35.27
	ATOM	5199	O	LEU	1303	15.238	-11.950	42.605	1.00	32.57
20	ATOM	5200	N	PTY	1304	15.912	-9.820	42.382	1.00	27.69
	ATOM	5201	H	PTY	1304	15.739	-8.867	42.521	1.00	0.00
	ATOM	5202	CA	PTY	1304	17.072	-10.190	41.594	1.00	21.92
	ATOM	5203	CB	PTY	1304	17.224	-9.402	40.276	1.00	20.89
	ATOM	5204	CG	PTY	1304	16.247	-9.844	39.214	1.00	15.14
25	ATOM	5205	CD1	PTY	1304	16.425	-11.042	38.469	1.00	9.03
	ATOM	5206	CE1	PTY	1304	15.461	-11.487	37.558	1.00	7.86
	ATOM	5207	CD2	PTY	1304	15.081	-9.117	38.994	1.00	14.16
	ATOM	5208	CE2	PTY	1304	14.127	-9.556	38.083	1.00	16.68
	ATOM	5209	CZ	PTY	1304	14.290	-10.742	37.368	1.00	12.39
30	ATOM	5210	OH	PTY	1304	13.224	-11.076	36.557	1.00	13.70
	ATOM	5211	OR1	PTY	1304	11.117	-11.770	37.454	1.00	13.77
	ATOM	5212	OR2	PTY	1304	12.831	-13.521	37.365	1.00	17.79
	ATOM	5213	OR3	PTY	1304	11.748	-12.738	35.436	1.00	12.59
	ATOM	5214	PR	PTY	1304	12.271	-12.339	36.718	1.00	16.46
35	ATOM	5215	C	PTY	1304	18.265	-9.885	42.458	1.00	17.48
	ATOM	5216	O	PTY	1304	18.382	-8.871	43.148	1.00	20.06
	ATOM	5217	N	ASN	1305	19.163	-10.830	42.439	1.00	11.57
	ATOM	5218	H	ASN	1305	19.013	-11.584	41.839	1.00	0.00
	ATOM	5219	CA	ASN	1305	20.348	-10.769	43.231	1.00	10.89

	ATOM	5220	CB	ASN	1305	20.897	-12.206	43.301	1.00	9.69
	ATOM	5221	CG	ASN	1305	19.929	-13.128	44.046	1.00	12.13
	ATOM	5222	OD1	ASN	1305	19.026	-13.796	43.514	1.00	8.54
	ATOM	5223	ND2	ASN	1305	20.109	-13.180	45.355	1.00	20.02
5	ATOM	5224	HD21	ASN	1305	20.850	-12.685	45.758	1.00	0.00
	ATOM	5225	HD22	ASN	1305	19.470	-13.717	45.882	1.00	0.00
	ATOM	5226	C	ASN	1305	21.314	-9.761	42.640	1.00	13.84
	ATOM	5227	O	ASN	1305	21.316	-9.521	41.431	1.00	14.72
	ATOM	5228	N	GLU	1306	22.119	-9.125	43.500	1.00	17.11
10	ATOM	5229	H	GLU	1306	22.146	-9.423	44.427	1.00	0.00
	ATOM	5230	CA	GLU	1306	23.059	-8.084	43.133	1.00	15.21
	ATOM	5231	CB	GLU	1306	23.022	-7.000	44.220	1.00	20.16
	ATOM	5232	CG	GLU	1306	23.202	-5.502	43.874	1.00	35.24
	ATOM	5233	CD	GLU	1306	24.611	-4.903	43.721	1.00	40.84
15	ATOM	5234	OE1	GLU	1306	24.823	-4.103	42.797	1.00	43.49
	ATOM	5235	OE2	GLU	1306	25.484	-5.205	44.539	1.00	37.95
	ATOM	5236	C	GLU	1306	24.401	-8.777	43.086	1.00	13.63
	ATOM	5237	O	GLU	1306	24.599	-9.803	43.747	1.00	14.90
	ATOM	5238	N	LEU	1307	25.352	-8.248	42.332	1.00	11.69
20	ATOM	5239	H	LEU	1307	25.164	-7.407	41.864	1.00	0.00
	ATOM	5240	CA	LEU	1307	26.670	-8.833	42.280	1.00	11.19
	ATOM	5241	CB	LEU	1307	27.404	-8.414	40.995	1.00	10.57
	ATOM	5242	CG	LEU	1307	26.812	-8.812	39.637	1.00	11.70
	ATOM	5243	CD1	LEU	1307	27.636	-8.170	38.547	1.00	7.23
25	ATOM	5244	CD2	LEU	1307	26.848	-10.319	39.429	1.00	3.92
	ATOM	5245	C	LEU	1307	27.492	-8.390	43.481	1.00	12.34
	ATOM	5246	O	LEU	1307	27.324	-7.310	44.041	1.00	8.93
	ATOM	5247	N	ASN	1308	28.429	-9.220	43.898	1.00	13.03
	ATOM	5248	H	ASN	1308	28.504	-10.085	43.458	1.00	0.00
30	ATOM	5249	CA	ASN	1308	29.361	-8.907	44.955	1.00	14.89
	ATOM	5250	CB	ASN	1308	29.793	-10.191	45.614	1.00	14.55
	ATOM	5251	CG	ASN	1308	30.548	-10.004	46.911	1.00	16.39
	ATOM	5252	OD1	ASN	1308	31.546	-9.285	46.976	1.00	17.52
	ATOM	5253	ND2	ASN	1308	30.128	-10.694	47.966	1.00	16.30
35	ATOM	5254	HD21	ASN	1308	29.391	-11.337	47.816	1.00	0.00
	ATOM	5255	HD22	ASN	1308	30.558	-10.549	48.836	1.00	0.00
	ATOM	5256	C	ASN	1308	30.526	-8.231	44.239	1.00	19.27
	ATOM	5257	O	ASN	1308	31.398	-8.849	43.604	1.00	16.77
	ATOM	5258	N	LEU	1309	30.458	-6.902	44.309	1.00	19.96

	ATOM	5259	H	LEU	1309	29.675	-6.517	44.757	1.00	0.00
	ATOM	5260	CA	LEU	1309	31.392	-5.992	43.662	1.00	18.16
	ATOM	5261	CB	LEU	1309	30.962	-4.545	43.948	1.00	14.91
	ATOM	5262	CG	LEU	1309	29.980	-3.827	42.984	1.00	20.31
5	ATOM	5263	CD1	LEU	1309	28.777	-4.662	42.645	1.00	20.12
	ATOM	5264	CD2	LEU	1309	29.492	-2.563	43.662	1.00	22.61
	ATOM	5265	C	LEU	1309	32.841	-6.177	44.027	1.00	18.95
	ATOM	5266	O	LEU	1309	33.700	-5.840	43.220	1.00	19.70
	ATOM	5267	N	GLY	1310	33.179	-6.740	45.192	1.00	24.64
10	ATOM	5268	H	GLY	1310	32.490	-7.028	45.825	1.00	0.00
	ATOM	5269	CA	GLY	1310	34.577	-7.013	45.518	1.00	21.96
	ATOM	5270	C	GLY	1310	35.074	-8.325	44.899	1.00	25.29
	ATOM	5271	O	GLY	1310	36.249	-8.662	45.035	1.00	25.13
	ATOM	5272	N	ARG	1311	34.210	-9.106	44.230	1.00	25.06
15	ATOM	5273	H	ARG	1311	33.270	-8.844	44.178	1.00	0.00
	ATOM	5274	CA	ARG	1311	34.616	-10.357	43.608	1.00	28.30
	ATOM	5275	CB	ARG	1311	33.672	-11.452	44.107	1.00	34.71
	ATOM	5276	CG	ARG	1311	34.141	-12.201	45.357	1.00	39.05
	ATOM	5277	CD	ARG	1311	35.342	-13.058	44.978	1.00	48.06
20	ATOM	5278	NE	ARG	1311	35.599	-14.117	45.937	1.00	55.93
	ATOM	5279	HE	ARG	1311	34.910	-14.798	46.082	1.00	0.00
	ATOM	5280	CZ	ARG	1311	36.749	-14.216	46.617	1.00	63.14
	ATOM	5281	NH1	ARG	1311	37.744	-13.337	46.455	1.00	67.95
	ATOM	5282	HH11	ARG	1311	37.646	-12.581	45.806	1.00	0.00
25	ATOM	5283	HH12	ARG	1311	38.588	-13.433	46.982	1.00	0.00
	ATOM	5284	NH2	ARG	1311	36.902	-15.213	47.494	1.00	66.62
	ATOM	5285	HH21	ARG	1311	36.168	-15.876	47.633	1.00	0.00
	ATOM	5286	HH22	ARG	1311	37.757	-15.294	48.007	1.00	0.00
	ATOM	5287	C	ARG	1311	34.620	-10.284	42.079	1.00	27.99
30	ATOM	5288	O	ARG	1311	34.700	-11.280	41.345	1.00	30.80
	ATOM	5289	N	ARG	1312	34.476	-9.062	41.589	1.00	25.90
	ATOM	5290	H	ARG	1312	34.477	-8.309	42.214	1.00	0.00
	ATOM	5291	CA	ARG	1312	34.500	-8.764	40.177	1.00	21.56
	ATOM	5292	CB	ARG	1312	33.926	-7.381	39.926	1.00	20.04
35	ATOM	5293	CG	ARG	1312	32.424	-7.339	39.718	1.00	21.41
	ATOM	5294	CD	ARG	1312	32.166	-6.440	38.507	1.00	25.51
	ATOM	5295	NE	ARG	1312	33.042	-6.760	37.375	1.00	23.48
	ATOM	5296	HE	ARG	1312	33.472	-7.639	37.346	1.00	0.00
	ATOM	5297	CZ	ARG	1312	33.309	-5.896	36.376	1.00	30.45

	ATOM	5298	NH1	ARG	1312	32.789	-4.660	36.302	1.00	24.19
	ATOM	5299	HH11	ARG	1312	32.161	-4.342	37.011	1.00	0.00
	ATOM	5300	HH12	ARG	1312	33.024	-4.067	35.532	1.00	0.00
	ATOM	5301	NH2	ARG	1312	34.166	-6.270	35.429	1.00	29.90
5	ATOM	5302	HH21	ARG	1312	34.591	-7.174	35.474	1.00	0.00
	ATOM	5303	HH22	ARG	1312	34.377	-5.651	34.673	1.00	0.00
	ATOM	5304	C	ARG	1312	35.910	-8.811	39.631	1.00	19.53
	ATOM	5305	O	ARG	1312	36.887	-8.561	40.322	1.00	19.04
	ATOM	5306	N	GLU	1313	35.998	-9.116	38.349	1.00	24.10
10	ATOM	5307	H	GLU	1313	35.184	-9.226	37.837	1.00	0.00
	ATOM	5308	CA	GLU	1313	37.247	-9.118	37.613	1.00	26.25
	ATOM	5309	CB	GLU	1313	37.151	-10.038	36.397	1.00	26.68
	ATOM	5310	CG	GLU	1313	37.071	-11.516	36.754	1.00	25.25
	ATOM	5311	CD	GLU	1313	38.287	-12.043	37.507	1.00	22.33
15	ATOM	5312	OE1	GLU	1313	39.408	-11.876	37.032	1.00	26.23
	ATOM	5313	OE2	GLU	1313	38.107	-12.629	38.571	1.00	22.65
	ATOM	5314	C	GLU	1313	37.498	-7.693	37.150	1.00	24.87
	ATOM	5315	O	GLU	1313	36.574	-6.939	36.825	1.00	24.77
	ATOM	5316	N	GLU	1314	38.752	-7.294	37.114	1.00	27.62
20	ATOM	5317	H	GLU	1314	39.462	-7.941	37.273	1.00	0.00
	ATOM	5318	CA	GLU	1314	39.104	-5.958	36.726	1.00	30.26
	ATOM	5319	CB	GLU	1314	39.571	-5.105	37.919	1.00	37.89
	ATOM	5320	CG	GLU	1314	38.557	-4.762	39.039	1.00	50.13
	ATOM	5321	CD	GLU	1314	37.237	-4.057	38.679	1.00	55.69
25	ATOM	5322	OE1	GLU	1314	37.178	-3.262	37.735	1.00	57.25
	ATOM	5323	OE2	GLU	1314	36.249	-4.304	39.374	1.00	56.57
	ATOM	5324	C	GLU	1314	40.240	-6.072	35.744	1.00	28.05
	ATOM	5325	O	GLU	1314	41.141	-6.909	35.842	1.00	26.42
	ATOM	5326	N	PTY	1315	40.132	-5.180	34.778	1.00	28.11
30	ATOM	5327	H	PTY	1315	39.447	-4.489	34.849	1.00	0.00
	ATOM	5328	CA	PTY	1315	41.118	-5.027	33.732	1.00	26.87
	ATOM	5329	CB	PTY	1315	40.404	-4.824	32.419	1.00	20.01
	ATOM	5330	CG	PTY	1315	40.128	-6.149	31.786	1.00	11.21
	ATOM	5331	CD1	PTY	1315	41.120	-6.812	31.054	1.00	7.33
35	ATOM	5332	CE1	PTY	1315	40.892	-8.077	30.509	1.00	12.31
	ATOM	5333	CD2	PTY	1315	38.889	-6.802	31.949	1.00	9.76
	ATOM	5334	CE2	PTY	1315	38.650	-8.070	31.403	1.00	6.98
	ATOM	5335	CZ	PTY	1315	39.647	-8.728	30.680	1.00	12.20
	ATOM	5336	OH	PTY	1315	39.377	-9.962	30.126	1.00	11.60

	ATOM	5337	OR1	PTY	1315	39.480	-11.598	32.039	1.00	23.46
	ATOM	5338	OR2	PTY	1315	41.612	-10.940	31.097	1.00	22.23
	ATOM	5339	OR3	PTY	1315	40.109	-12.344	29.936	1.00	21.17
	ATOM	5340	PR	PTY	1315	40.190	-11.164	30.804	1.00	16.43
5	ATOM	5341	C	PTY	1315	41.937	-3.825	34.101	1.00	28.24
	ATOM	5342	O	PTY	1315	41.713	-3.239	35.167	1.00	34.41
	ATOM	5343	N	ASP	1316	42.895	-3.433	33.300	1.00	30.96
	ATOM	5344	H	ASP	1316	42.989	-3.813	32.405	1.00	0.00
	ATOM	5345	CA	ASP	1316	43.655	-2.257	33.639	1.00	37.10
10	ATOM	5346	CB	ASP	1316	45.127	-2.491	33.430	1.00	41.47
	ATOM	5347	CG	ASP	1316	45.767	-3.314	34.519	1.00	45.09
	ATOM	5348	OD1	ASP	1316	46.533	-2.742	35.291	1.00	51.31
	ATOM	5349	OD2	ASP	1316	45.509	-4.514	34.583	1.00	47.70
	ATOM	5350	C	ASP	1316	43.193	-1.143	32.733	1.00	39.53
15	ATOM	5351	O	ASP	1316	42.724	-1.390	31.615	1.00	45.74
	ATOM	5352	N	VAL	1317	43.280	0.085	33.229	1.00	41.83
	ATOM	5353	H	VAL	1317	43.722	0.236	34.088	1.00	0.00
	ATOM	5354	CA	VAL	1317	42.948	1.243	32.418	1.00	44.85
	ATOM	5355	CB	VAL	1317	41.791	2.049	33.116	1.00	43.64
20	ATOM	5356	CG1	VAL	1317	42.225	2.723	34.411	1.00	46.74
	ATOM	5357	CG2	VAL	1317	41.280	3.069	32.112	1.00	46.56
	ATOM	5358	C	VAL	1317	44.269	2.008	32.319	1.00	45.31
	ATOM	5359	O	VAL	1317	45.215	1.761	33.089	1.00	41.69
	ATOM	5360	N	LEU	1318	44.340	2.869	31.308	1.00	45.11
25	ATOM	5361	H	LEU	1318	43.558	2.982	30.733	1.00	0.00
	ATOM	5362	CA	LEU	1318	45.520	3.675	31.063	1.00	47.99
	ATOM	5363	CB	LEU	1318	45.299	4.414	29.757	1.00	42.85
	ATOM	5364	CG	LEU	1318	44.989	3.532	28.554	1.00	38.00
	ATOM	5365	CD1	LEU	1318	44.192	4.345	27.606	1.00	32.68
30	ATOM	5366	CD2	LEU	1318	46.238	3.003	27.888	1.00	34.68
	ATOM	5367	C	LEU	1318	45.793	4.633	32.222	1.00	53.72
	ATOM	5368	O	LEU	1318	44.861	5.114	32.887	1.00	53.92
	ATOM	5369	N	ASP	1319	47.101	4.744	32.471	1.00	60.15
	ATOM	5370	H	ASP	1319	47.696	4.244	31.885	1.00	0.00
35	ATOM	5371	CA	ASP	1319	47.709	5.555	33.519	1.00	67.37
	ATOM	5372	CB	ASP	1319	49.218	5.246	33.704	1.00	71.97
	ATOM	5373	CG	ASP	1319	49.622	3.840	34.143	1.00	75.12
	ATOM	5374	OD1	ASP	1319	50.483	3.737	35.019	1.00	75.09
	ATOM	5375	OD2	ASP	1319	49.104	2.855	33.607	1.00	75.64

	ATOM	5376	C	ASP	1319	47.599	7.036	33.206	1.00	69.96
	ATOM	5377	O	ASP	1319	48.000	7.450	32.113	1.00	72.41
	ATOM	5378	OT	ASP	1319	47.117	7.758	34.075	1.00	72.49
	ATOM	5379	OH2	H2O	2091	11.613	6.292	3.790	1.00	9.15
5	ATOM	5380	H1	H2O	2091	11.021	6.247	3.030	1.00	0.00
	ATOM	5381	H2	H2O	2091	12.286	6.908	3.506	1.00	0.00
	ATOM	5382	OH2	H2O	2289	-0.606	1.712	22.323	1.00	38.94
	ATOM	5383	H1	H2O	2289	-0.216	1.680	23.198	1.00	0.00
	ATOM	5384	H2	H2O	2289	-1.566	1.715	22.535	1.00	0.00
10	ATOM	5385	OH2	H2O	2003	-4.862	-2.850	17.008	1.00	55.78
	ATOM	5386	H1	H2O	2003	-5.578	-2.602	16.416	1.00	0.00
	ATOM	5387	H2	H2O	2003	-5.228	-3.616	17.461	1.00	0.00
	ATOM	5388	OH2	H2O	2035	0.414	8.828	19.112	1.00	32.59
	ATOM	5389	H1	H2O	2035	0.960	8.879	19.902	1.00	0.00
15	ATOM	5390	H2	H2O	2035	-0.430	9.187	19.400	1.00	0.00
	ATOM	5391	OH2	H2O	2230	-3.731	1.596	4.235	1.00	7.64
	ATOM	5392	H1	H2O	2230	-3.892	1.670	3.275	1.00	0.00
	ATOM	5393	H2	H2O	2230	-2.780	1.688	4.279	1.00	0.00
	ATOM	5394	OH2	H2O	2226	4.474	-1.056	-2.417	1.00	39.20
20	ATOM	5395	H1	H2O	2226	3.910	-1.250	-1.642	1.00	0.00
	ATOM	5396	H2	H2O	2226	4.883	-1.923	-2.534	1.00	0.00
	ATOM	5397	OH2	H2O	2235	5.036	1.440	-3.371	1.00	34.16
	ATOM	5398	H1	H2O	2235	4.530	1.009	-4.064	1.00	0.00
	ATOM	5399	H2	H2O	2235	5.003	0.712	-2.714	1.00	0.00
25	ATOM	5400	OH2	H2O	2367	6.779	5.277	-2.088	1.00	14.63
	ATOM	5401	H1	H2O	2367	6.838	4.525	-2.722	1.00	0.00
	ATOM	5402	H2	H2O	2367	7.586	5.141	-1.574	1.00	0.00
	ATOM	5403	OH2	H2O	2277	0.582	2.614	-1.861	1.00	15.62
	ATOM	5404	H1	H2O	2277	0.905	1.731	-1.641	1.00	0.00
30	ATOM	5405	H2	H2O	2277	-0.256	2.437	-2.298	1.00	0.00
	ATOM	5406	OH2	H2O	2217	2.900	-2.745	-0.055	1.00	18.30
	ATOM	5407	H1	H2O	2217	3.827	-2.865	0.230	1.00	0.00
	ATOM	5408	H2	H2O	2217	2.421	-3.213	0.635	1.00	0.00
	ATOM	5409	OH2	H2O	2021	5.582	-3.229	0.413	1.00	12.00
35	ATOM	5410	H1	H2O	2021	6.399	-3.389	0.934	1.00	0.00
	ATOM	5411	H2	H2O	2021	6.035	-2.957	-0.416	1.00	0.00
	ATOM	5412	OH2	H2O	2265	7.276	-2.450	-1.549	1.00	19.34
	ATOM	5413	H1	H2O	2265	7.061	-1.547	-1.814	1.00	0.00
	ATOM	5414	H2	H2O	2265	8.249	-2.355	-1.576	1.00	0.00

	ATOM	5415	OH2	H2O	2050	9.531	-1.039	-1.954	1.00	15.27
	ATOM	5416	H1	H2O	2050	9.759	-0.600	-2.781	1.00	0.00
	ATOM	5417	H2	H2O	2050	10.415	-1.132	-1.532	1.00	0.00
	ATOM	5418	OH2	H2O	2188	7.944	-3.913	1.547	1.00	6.13
5	ATOM	5419	H1	H2O	2188	8.919	-3.847	1.542	1.00	0.00
	ATOM	5420	H2	H2O	2188	7.784	-4.090	2.502	1.00	0.00
	ATOM	5421	OH2	H2O	2106	11.995	-1.225	-0.912	1.00	10.49
	ATOM	5422	H1	H2O	2106	12.822	-1.128	-1.408	1.00	0.00
	ATOM	5423	H2	H2O	2106	12.292	-1.014	-0.019	1.00	0.00
10	ATOM	5424	OH2	H2O	2263	10.556	-3.103	2.014	1.00	16.72
	ATOM	5425	H1	H2O	2263	9.920	-2.379	2.027	1.00	0.00
	ATOM	5426	H2	H2O	2263	11.186	-2.784	1.353	1.00	0.00
	ATOM	5427	OH2	H2O	2369	7.366	-4.615	4.091	1.00	8.30
	ATOM	5428	H1	H2O	2369	6.788	-3.949	4.488	1.00	0.00
15	ATOM	5429	H2	H2O	2369	8.158	-4.482	4.669	1.00	0.00
	ATOM	5430	OH2	H2O	2336	2.623	-5.870	6.276	1.00	8.51
	ATOM	5431	H1	H2O	2336	3.445	-5.538	5.917	1.00	0.00
	ATOM	5432	H2	H2O	2336	2.231	-5.086	6.672	1.00	0.00
	ATOM	5433	OH2	H2O	2005	6.010	3.922	2.813	1.00	5.77
20	ATOM	5434	H1	H2O	2005	5.210	3.992	2.283	1.00	0.00
	ATOM	5435	H2	H2O	2005	5.836	3.150	3.362	1.00	0.00
	ATOM	5436	OH2	H2O	2013	8.688	3.977	2.421	1.00	4.93
	ATOM	5437	H1	H2O	2013	7.716	3.844	2.522	1.00	0.00
	ATOM	5438	H2	H2O	2013	8.704	4.934	2.501	1.00	0.00
25	ATOM	5439	OH2	H2O	2210	-1.947	22.873	18.487	1.00	21.45
	ATOM	5440	H1	H2O	2210	-1.077	23.018	18.107	1.00	0.00
	ATOM	5441	H2	H2O	2210	-1.901	21.999	18.875	1.00	0.00
	ATOM	5442	OH2	H2O	2397	6.940	3.302	-4.007	1.00	14.99
	ATOM	5443	H1	H2O	2397	6.259	2.617	-3.809	1.00	0.00
30	ATOM	5444	H2	H2O	2397	7.709	2.739	-4.215	1.00	0.00
	ATOM	5445	OH2	H2O	2211	5.320	7.091	-4.231	1.00	5.91
	ATOM	5446	H1	H2O	2211	5.164	6.691	-5.096	1.00	0.00
	ATOM	5447	H2	H2O	2211	5.887	6.432	-3.794	1.00	0.00
	ATOM	5448	OH2	H2O	2088	6.170	9.583	-5.206	1.00	3.99
35	ATOM	5449	H1	H2O	2088	5.979	9.263	-6.114	1.00	0.00
	ATOM	5450	H2	H2O	2088	6.024	8.768	-4.695	1.00	0.00
	ATOM	5451	OH2	H2O	2127	4.543	11.747	-5.012	1.00	17.56
	ATOM	5452	H1	H2O	2127	4.355	11.872	-5.943	1.00	0.00
	ATOM	5453	H2	H2O	2127	5.174	10.996	-5.030	1.00	0.00

	ATOM	5454	OH2	H2O	2393	4.660	15.853	-4.263	1.00	17.70
	ATOM	5455	H1	H2O	2393	4.191	16.391	-3.624	1.00	0.00
	ATOM	5456	H2	H2O	2393	3.945	15.378	-4.706	1.00	0.00
	ATOM	5457	OH2	H2O	2363	1.201	14.180	-4.789	1.00	14.09
5	ATOM	5458	H1	H2O	2363	0.982	14.252	-3.860	1.00	0.00
	ATOM	5459	H2	H2O	2363	0.630	13.434	-5.056	1.00	0.00
	ATOM	5460	OH2	H2O	2252	7.730	13.503	-4.221	1.00	26.93
	ATOM	5461	H1	H2O	2252	7.376	12.604	-4.201	1.00	0.00
	ATOM	5462	H2	H2O	2252	6.918	14.021	-4.319	1.00	0.00
10	ATOM	5463	OH2	H2O	2337	-0.119	11.846	-4.785	1.00	11.20
	ATOM	5464	H1	H2O	2337	-0.770	11.321	-4.302	1.00	0.00
	ATOM	5465	H2	H2O	2337	0.699	11.419	-4.499	1.00	0.00
	ATOM	5466	OH2	H2O	2447	-0.079	10.337	-7.542	1.00	40.91
	ATOM	5467	H1	H2O	2447	-0.141	11.081	-6.922	1.00	0.00
15	ATOM	5468	H2	H2O	2447	-0.776	9.752	-7.213	1.00	0.00
	ATOM	5469	OH2	H2O	2131	-2.231	7.960	-6.047	1.00	23.04
	ATOM	5470	H1	H2O	2131	-2.931	7.867	-5.394	1.00	0.00
	ATOM	5471	H2	H2O	2131	-2.407	7.253	-6.673	1.00	0.00
	ATOM	5472	OH2	H2O	2012	-7.124	7.460	-2.263	1.00	20.39
20	ATOM	5473	H1	H2O	2012	-7.847	8.045	-1.992	1.00	0.00
	ATOM	5474	H2	H2O	2012	-6.813	7.923	-3.054	1.00	0.00
	ATOM	5475	OH2	H2O	2323	-7.338	5.501	-0.353	1.00	64.57
	ATOM	5476	H1	H2O	2323	-7.697	4.705	-0.764	1.00	0.00
	ATOM	5477	H2	H2O	2323	-7.245	6.096	-1.135	1.00	0.00
25	ATOM	5478	OH2	H2O	2037	-7.188	10.431	-4.834	1.00	18.12
	ATOM	5479	H1	H2O	2037	-7.947	11.011	-4.942	1.00	0.00
	ATOM	5480	H2	H2O	2037	-6.730	10.509	-5.672	1.00	0.00
	ATOM	5481	OH2	H2O	2428	-10.421	9.838	2.454	1.00	48.35
	ATOM	5482	H1	H2O	2428	-9.470	9.846	2.679	1.00	0.00
30	ATOM	5483	H2	H2O	2428	-10.709	10.567	3.029	1.00	0.00
	ATOM	5484	OH2	H2O	2017	-8.108	10.668	3.645	1.00	7.28
	ATOM	5485	H1	H2O	2017	-8.845	11.291	3.785	1.00	0.00
	ATOM	5486	H2	H2O	2017	-7.664	10.692	4.498	1.00	0.00
	ATOM	5487	OH2	H2O	2219	-10.483	12.122	3.962	1.00	33.10
35	ATOM	5488	H1	H2O	2219	-11.182	12.413	3.328	1.00	0.00
	ATOM	5489	H2	H2O	2219	-10.338	12.947	4.438	1.00	0.00
	ATOM	5490	OH2	H2O	2262	-12.360	13.300	2.252	1.00	20.55
	ATOM	5491	H1	H2O	2262	-11.954	14.149	2.024	1.00	0.00
	ATOM	5492	H2	H2O	2262	-13.288	13.532	2.382	1.00	0.00

	ATOM	5493	OH2	H2O	2381	-11.522	8.285	0.417	1.00	28.89
	ATOM	5494	H1	H2O	2381	-11.065	8.791	1.123	1.00	0.00
	ATOM	5495	H2	H2O	2381	-12.392	8.682	0.427	1.00	0.00
	ATOM	5496	OH2	H2O	2245	-9.256	20.762	7.011	1.00	26.26
5	ATOM	5497	H1	H2O	2245	-10.180	21.032	6.982	1.00	0.00
	ATOM	5498	H2	H2O	2245	-9.310	19.800	6.966	1.00	0.00
	ATOM	5499	OH2	H2O	2339	-6.000	18.865	9.435	1.00	27.95
	ATOM	5500	H1	H2O	2339	-6.072	17.927	9.222	1.00	0.00
	ATOM	5501	H2	H2O	2339	-6.887	19.186	9.244	1.00	0.00
10	ATOM	5502	OH2	H2O	2224	-9.178	21.950	4.490	1.00	14.21
	ATOM	5503	H1	H2O	2224	-8.297	22.121	4.123	1.00	0.00
	ATOM	5504	H2	H2O	2224	-8.945	21.700	5.404	1.00	0.00
	ATOM	5505	OH2	H2O	2157	11.171	-10.628	-3.794	1.00	7.88
	ATOM	5506	H1	H2O	2157	10.586	-9.878	-4.046	1.00	0.00
15	ATOM	5507	H2	H2O	2157	10.577	-11.117	-3.221	1.00	0.00
	ATOM	5508	OH2	H2O	2248	-6.862	19.924	0.800	1.00	20.11
	ATOM	5509	H1	H2O	2248	-7.017	19.074	0.361	1.00	0.00
	ATOM	5510	H2	H2O	2248	-6.417	20.445	0.127	1.00	0.00
	ATOM	5511	OH2	H2O	2283	-4.214	19.691	11.429	1.00	12.06
20	ATOM	5512	H1	H2O	2283	-4.833	19.464	10.706	1.00	0.00
	ATOM	5513	H2	H2O	2283	-3.531	20.196	10.967	1.00	0.00
	ATOM	5514	OH2	H2O	2255	-3.770	23.422	11.688	1.00	11.13
	ATOM	5515	H1	H2O	2255	-3.036	22.810	11.546	1.00	0.00
	ATOM	5516	H2	H2O	2255	-4.446	22.840	12.045	1.00	0.00
25	ATOM	5517	OH2	H2O	2237	-1.087	23.450	4.984	1.00	5.75
	ATOM	5518	H1	H2O	2237	-1.236	22.495	5.008	1.00	0.00
	ATOM	5519	H2	H2O	2237	-1.995	23.715	4.776	1.00	0.00
	ATOM	5520	OH2	H2O	2236	-2.200	7.603	3.264	1.00	94.00
	ATOM	5521	H1	H2O	2236	-1.248	7.737	3.328	1.00	0.00
30	ATOM	5522	H2	H2O	2236	-2.478	7.806	4.166	1.00	0.00
	ATOM	5523	OH2	H2O	2032	9.637	-4.335	5.775	1.00	22.19
	ATOM	5524	H1	H2O	2032	9.827	-4.315	6.735	1.00	0.00
	ATOM	5525	H2	H2O	2032	10.503	-4.129	5.414	1.00	0.00
	ATOM	5526	OH2	H2O	2384	8.433	-8.052	11.060	1.00	48.89
35	ATOM	5527	H1	H2O	2384	8.776	-8.614	10.352	1.00	0.00
	ATOM	5528	H2	H2O	2384	7.535	-8.400	11.097	1.00	0.00
	ATOM	5529	OH2	H2O	2008	10.386	-0.880	7.792	1.00	3.56
	ATOM	5530	H1	H2O	2008	10.921	-1.130	7.031	1.00	0.00
	ATOM	5531	H2	H2O	2008	9.704	-0.366	7.345	1.00	0.00

	ATOM	5532	OH2	H2O	2019	10.216	-3.653	8.487	1.00	19.93
	ATOM	5533	H1	H2O	2019	9.397	-3.758	9.015	1.00	0.00
	ATOM	5534	H2	H2O	2019	10.150	-2.713	8.232	1.00	0.00
	ATOM	5535	OH2	H2O	2048	13.175	4.924	8.006	1.00	15.14
5	ATOM	5536	H1	H2O	2048	12.391	5.233	7.536	1.00	0.00
	ATOM	5537	H2	H2O	2048	12.850	4.832	8.910	1.00	0.00
	ATOM	5538	OH2	H2O	2028	14.613	-6.647	11.993	1.00	18.49
	ATOM	5539	H1	H2O	2028	13.928	-6.819	11.337	1.00	0.00
	ATOM	5540	H2	H2O	2028	14.201	-5.975	12.541	1.00	0.00
10	ATOM	5541	OH2	H2O	2051	14.444	1.482	10.802	1.00	2.00
	ATOM	5542	H1	H2O	2051	14.489	0.558	11.082	1.00	0.00
	ATOM	5543	H2	H2O	2051	15.329	1.607	10.393	1.00	0.00
	ATOM	5544	OH2	H2O	2390	7.071	26.689	10.142	1.00	64.54
	ATOM	5545	H1	H2O	2390	7.620	27.385	10.523	1.00	0.00
15	ATOM	5546	H2	H2O	2390	7.141	26.008	10.831	1.00	0.00
	ATOM	5547	OH2	H2O	2416	7.110	24.301	5.255	1.00	25.90
	ATOM	5548	H1	H2O	2416	7.917	24.786	5.458	1.00	0.00
	ATOM	5549	H2	H2O	2416	6.872	24.654	4.389	1.00	0.00
	ATOM	5550	OH2	H2O	2278	2.347	20.840	-2.242	1.00	25.42
20	ATOM	5551	H1	H2O	2278	1.432	20.561	-2.127	1.00	0.00
	ATOM	5552	H2	H2O	2278	2.313	21.668	-1.736	1.00	0.00
	ATOM	5553	OH2	H2O	2241	4.928	19.565	-1.717	1.00	13.89
	ATOM	5554	H1	H2O	2241	4.055	19.952	-1.941	1.00	0.00
	ATOM	5555	H2	H2O	2241	5.389	19.661	-2.552	1.00	0.00
25	ATOM	5556	OH2	H2O	2330	5.495	19.739	11.331	1.00	89.21
	ATOM	5557	H1	H2O	2330	5.618	19.333	12.203	1.00	0.00
	ATOM	5558	H2	H2O	2330	4.537	19.756	11.269	1.00	0.00
	ATOM	5559	OH2	H2O	2319	9.830	15.311	2.100	1.00	15.29
	ATOM	5560	H1	H2O	2319	10.441	14.835	1.515	1.00	0.00
30	ATOM	5561	H2	H2O	2319	9.294	15.773	1.419	1.00	0.00
	ATOM	5562	OH2	H2O	2129	8.201	16.349	0.185	1.00	20.32
	ATOM	5563	H1	H2O	2129	7.738	17.108	0.561	1.00	0.00
	ATOM	5564	H2	H2O	2129	8.316	16.597	-0.737	1.00	0.00
	ATOM	5565	OH2	H2O	2405	10.491	14.246	-3.600	1.00	13.44
35	ATOM	5566	H1	H2O	2405	10.534	14.843	-4.349	1.00	0.00
	ATOM	5567	H2	H2O	2405	9.584	13.891	-3.697	1.00	0.00
	ATOM	5568	OH2	H2O	2002	15.026	10.845	9.558	1.00	3.64
	ATOM	5569	H1	H2O	2002	15.184	11.736	9.185	1.00	0.00
	ATOM	5570	H2	H2O	2002	15.740	10.321	9.146	1.00	0.00

	ATOM	5571	OH2	H2O	2104	15.471	13.315	8.633	1.00	17.22
	ATOM	5572	H1	H2O	2104	14.807	13.835	8.155	1.00	0.00
	ATOM	5573	H2	H2O	2104	15.759	13.928	9.338	1.00	0.00
	ATOM	5574	OH2	H2O	2437	17.011	9.295	8.530	1.00	20.44
5	ATOM	5575	H1	H2O	2437	16.669	8.421	8.295	1.00	0.00
	ATOM	5576	H2	H2O	2437	17.919	9.230	8.217	1.00	0.00
	ATOM	5577	OH2	H2O	2128	17.124	10.103	3.658	1.00	38.97
	ATOM	5578	H1	H2O	2128	16.954	10.675	4.434	1.00	0.00
	ATOM	5579	H2	H2O	2128	17.281	10.773	2.990	1.00	0.00
10	ATOM	5580	OH2	H2O	2083	18.716	6.786	5.655	1.00	38.25
	ATOM	5581	H1	H2O	2083	18.094	6.062	5.812	1.00	0.00
	ATOM	5582	H2	H2O	2083	18.449	7.120	4.794	1.00	0.00
	ATOM	5583	OH2	H2O	2167	18.412	8.237	1.848	1.00	17.94
	ATOM	5584	H1	H2O	2167	17.942	8.754	2.529	1.00	0.00
15	ATOM	5585	H2	H2O	2167	19.202	8.789	1.688	1.00	0.00
	ATOM	5586	OH2	H2O	2026	15.879	5.673	7.246	1.00	48.02
	ATOM	5587	H1	H2O	2026	14.941	5.437	7.369	1.00	0.00
	ATOM	5588	H2	H2O	2026	16.175	5.047	6.554	1.00	0.00
	ATOM	5589	OH2	H2O	2049	17.314	7.977	13.797	1.00	16.58
20	ATOM	5590	H1	H2O	2049	16.400	8.007	13.482	1.00	0.00
	ATOM	5591	H2	H2O	2049	17.375	7.066	14.141	1.00	0.00
	ATOM	5592	OH2	H2O	2228	20.491	10.527	13.557	1.00	79.19
	ATOM	5593	H1	H2O	2228	21.024	9.803	13.223	1.00	0.00
	ATOM	5594	H2	H2O	2228	19.983	10.083	14.274	1.00	0.00
25	ATOM	5595	OH2	H2O	2247	18.848	9.457	15.383	1.00	28.02
	ATOM	5596	H1	H2O	2247	18.287	8.895	14.791	1.00	0.00
	ATOM	5597	H2	H2O	2247	18.206	9.713	16.054	1.00	0.00
	ATOM	5598	OH2	H2O	2189	7.177	0.098	20.558	1.00	12.38
	ATOM	5599	H1	H2O	2189	7.665	-0.699	20.329	1.00	0.00
30	ATOM	5600	H2	H2O	2189	7.855	0.612	21.009	1.00	0.00
	ATOM	5601	OH2	H2O	2153	10.987	-2.027	19.374	1.00	30.53
	ATOM	5602	H1	H2O	2153	11.365	-1.186	19.661	1.00	0.00
	ATOM	5603	H2	H2O	2153	10.534	-1.780	18.559	1.00	0.00
	ATOM	5604	OH2	H2O	2387	15.573	-5.220	22.034	1.00	26.88
35	ATOM	5605	H1	H2O	2387	15.420	-4.414	22.537	1.00	0.00
	ATOM	5606	H2	H2O	2387	15.880	-4.902	21.183	1.00	0.00
	ATOM	5607	OH2	H2O	2081	11.585	0.443	22.679	1.00	18.85
	ATOM	5608	H1	H2O	2081	10.705	0.405	22.293	1.00	0.00
	ATOM	5609	H2	H2O	2081	12.133	0.412	21.891	1.00	0.00

	ATOM	5610	OH2	H2O	2065	12.324	11.499	16.673	1.00	6.58
	ATOM	5611	H1	H2O	2065	12.905	11.565	17.437	1.00	0.00
	ATOM	5612	H2	H2O	2065	12.163	12.420	16.446	1.00	0.00
	ATOM	5613	OH2	H2O	2307	13.497	15.746	18.110	1.00	21.94
5	ATOM	5614	H1	H2O	2307	13.198	16.526	17.607	1.00	0.00
	ATOM	5615	H2	H2O	2307	14.125	16.164	18.711	1.00	0.00
	ATOM	5616	OH2	H2O	2174	16.345	14.884	10.755	1.00	12.56
	ATOM	5617	H1	H2O	2174	15.955	14.561	11.582	1.00	0.00
	ATOM	5618	H2	H2O	2174	17.276	14.775	10.999	1.00	0.00
10	ATOM	5619	OH2	H2O	2080	16.899	10.708	22.439	1.00	18.59
	ATOM	5620	H1	H2O	2080	16.192	10.707	23.107	1.00	0.00
	ATOM	5621	H2	H2O	2080	17.504	10.070	22.839	1.00	0.00
	ATOM	5622	OH2	H2O	2145	8.985	6.741	24.686	1.00	10.42
	ATOM	5623	H1	H2O	2145	8.457	7.507	24.413	1.00	0.00
15	ATOM	5624	H2	H2O	2145	8.932	6.789	25.642	1.00	0.00
	ATOM	5625	OH2	H2O	2234	-1.344	12.735	21.035	1.00	32.56
	ATOM	5626	H1	H2O	2234	-1.446	12.294	20.176	1.00	0.00
	ATOM	5627	H2	H2O	2234	-1.080	13.620	20.775	1.00	0.00
	ATOM	5628	OH2	H2O	2389	-1.529	11.859	18.208	1.00	25.81
20	ATOM	5629	H1	H2O	2389	-1.103	11.457	17.445	1.00	0.00
	ATOM	5630	H2	H2O	2389	-1.683	12.782	17.891	1.00	0.00
	ATOM	5631	OH2	H2O	2442	-4.227	11.513	17.909	1.00	40.21
	ATOM	5632	H1	H2O	2442	-4.311	12.468	17.887	1.00	0.00
	ATOM	5633	H2	H2O	2442	-3.299	11.412	18.188	1.00	0.00
25	ATOM	5634	OH2	H2O	2294	-1.737	4.678	21.101	1.00	50.85
	ATOM	5635	H1	H2O	2294	-1.393	5.578	21.112	1.00	0.00
	ATOM	5636	H2	H2O	2294	-2.553	4.753	21.611	1.00	0.00
	ATOM	5637	OH2	H2O	2435	3.968	2.794	20.047	1.00	20.89
	ATOM	5638	H1	H2O	2435	4.484	1.976	19.985	1.00	0.00
30	ATOM	5639	H2	H2O	2435	3.362	2.571	20.765	1.00	0.00
	ATOM	5640	OH2	H2O	2195	-2.103	14.513	17.363	1.00	45.39
	ATOM	5641	H1	H2O	2195	-1.333	15.013	17.684	1.00	0.00
	ATOM	5642	H2	H2O	2195	-2.463	15.110	16.687	1.00	0.00
	ATOM	5643	OH2	H2O	2292	4.660	24.323	21.790	1.00	31.24
35	ATOM	5644	H1	H2O	2292	3.750	24.146	21.548	1.00	0.00
	ATOM	5645	H2	H2O	2292	4.768	23.824	22.603	1.00	0.00
	ATOM	5646	OH2	H2O	2445	7.938	18.020	26.568	1.00	33.41
	ATOM	5647	H1	H2O	2445	8.797	18.087	27.007	1.00	0.00
	ATOM	5648	H2	H2O	2445	7.479	17.386	27.129	1.00	0.00

	ATOM	5649	OH2	H2O	2400	10.560	23.286	20.157	1.00	25.80
	ATOM	5650	H1	H2O	2400	10.053	24.081	19.966	1.00	0.00
	ATOM	5651	H2	H2O	2400	11.446	23.627	20.311	1.00	0.00
	ATOM	5652	OH2	H2O	2427	10.358	23.548	15.422	1.00	19.65
5	ATOM	5653	H1	H2O	2427	9.950	23.212	14.607	1.00	0.00
	ATOM	5654	H2	H2O	2427	10.834	24.319	15.099	1.00	0.00
	ATOM	5655	OH2	H2O	2275	-11.995	7.700	8.856	1.00	56.20
	ATOM	5656	H1	H2O	2275	-11.299	7.070	9.091	1.00	0.00
	ATOM	5657	H2	H2O	2275	-11.495	8.399	8.430	1.00	0.00
10	ATOM	5658	OH2	H2O	2253	-10.228	1.870	9.007	1.00	15.68
	ATOM	5659	H1	H2O	2253	-9.398	1.562	8.616	1.00	0.00
	ATOM	5660	H2	H2O	2253	-10.313	2.724	8.562	1.00	0.00
	ATOM	5661	OH2	H2O	2076	7.254	-10.240	9.154	1.00	13.69
	ATOM	5662	H1	H2O	2076	7.440	-11.075	9.629	1.00	0.00
15	ATOM	5663	H2	H2O	2076	6.947	-10.557	8.294	1.00	0.00
	ATOM	5664	OH2	H2O	2191	14.696	-18.909	5.506	1.00	21.42
	ATOM	5665	H1	H2O	2191	13.932	-18.906	6.088	1.00	0.00
	ATOM	5666	H2	H2O	2191	14.993	-17.999	5.512	1.00	0.00
	ATOM	5667	OH2	H2O	2025	13.620	-17.448	15.050	1.00	16.30
20	ATOM	5668	H1	H2O	2025	13.150	-16.664	15.367	1.00	0.00
	ATOM	5669	H2	H2O	2025	12.888	-18.073	15.081	1.00	0.00
	ATOM	5670	OH2	H2O	2184	19.050	-19.408	16.078	1.00	37.17
	ATOM	5671	H1	H2O	2184	18.624	-19.737	15.276	1.00	0.00
	ATOM	5672	H2	H2O	2184	19.972	-19.612	15.906	1.00	0.00
25	ATOM	5673	OH2	H2O	2429	11.300	-29.483	9.061	1.00	46.58
	ATOM	5674	H1	H2O	2429	12.135	-29.548	8.589	1.00	0.00
	ATOM	5675	H2	H2O	2429	11.528	-28.904	9.800	1.00	0.00
	ATOM	5676	OH2	H2O	2196	4.962	-12.445	14.206	1.00	55.45
	ATOM	5677	H1	H2O	2196	4.086	-12.167	14.476	1.00	0.00
30	ATOM	5678	H2	H2O	2196	5.364	-11.658	13.839	1.00	0.00
	ATOM	5679	OH2	H2O	2426	7.900	-12.611	10.746	1.00	23.66
	ATOM	5680	H1	H2O	2426	8.783	-12.871	11.025	1.00	0.00
	ATOM	5681	H2	H2O	2426	7.348	-13.325	11.080	1.00	0.00
	ATOM	5682	OH2	H2O	2052	10.898	-6.045	11.814	1.00	25.42
35	ATOM	5683	H1	H2O	2052	10.206	-6.592	11.412	1.00	0.00
	ATOM	5684	H2	H2O	2052	10.931	-6.401	12.704	1.00	0.00
	ATOM	5685	OH2	H2O	2103	15.818	-19.257	15.652	1.00	72.28
	ATOM	5686	H1	H2O	2103	15.184	-18.542	15.441	1.00	0.00
	ATOM	5687	H2	H2O	2103	16.640	-18.781	15.841	1.00	0.00

	ATOM	5688	OH2	H2O	2388	17.485	-7.351	16.533	1.00	39.92
	ATOM	5689	H1	H2O	2388	17.641	-6.500	16.116	1.00	0.00
	ATOM	5690	H2	H2O	2388	16.879	-7.780	15.920	1.00	0.00
	ATOM	5691	OH2	H2O	2350	20.265	-5.720	9.455	1.00	41.89
5	ATOM	5692	H1	H2O	2350	20.758	-6.394	8.969	1.00	0.00
	ATOM	5693	H2	H2O	2350	19.357	-6.018	9.356	1.00	0.00
	ATOM	5694	OH2	H2O	2183	17.171	-14.901	4.225	1.00	28.26
	ATOM	5695	H1	H2O	2183	16.436	-14.447	3.806	1.00	0.00
	ATOM	5696	H2	H2O	2183	17.728	-14.161	4.506	1.00	0.00
10	ATOM	5697	OH2	H2O	2151	24.700	-8.316	1.652	1.00	100.47
	ATOM	5698	H1	H2O	2151	24.695	-7.542	2.237	1.00	0.00
	ATOM	5699	H2	H2O	2151	25.603	-8.257	1.302	1.00	0.00
	ATOM	5700	OH2	H2O	2138	21.387	-6.900	2.709	1.00	8.74
	ATOM	5701	H1	H2O	2138	21.332	-6.835	3.670	1.00	0.00
15	ATOM	5702	H2	H2O	2138	22.351	-6.980	2.613	1.00	0.00
	ATOM	5703	OH2	H2O	2004	18.730	-8.591	1.591	1.00	7.03
	ATOM	5704	H1	H2O	2004	19.326	-8.205	2.261	1.00	0.00
	ATOM	5705	H2	H2O	2004	17.917	-8.662	2.128	1.00	0.00
	ATOM	5706	OH2	H2O	2218	20.874	-17.466	2.643	1.00	55.49
20	ATOM	5707	H1	H2O	2218	21.747	-17.302	3.056	1.00	0.00
	ATOM	5708	H2	H2O	2218	20.481	-16.588	2.671	1.00	0.00
	ATOM	5709	OH2	H2O	2419	20.819	-17.988	7.921	1.00	29.43
	ATOM	5710	H1	H2O	2419	20.456	-17.393	7.234	1.00	0.00
	ATOM	5711	H2	H2O	2419	21.769	-17.913	7.729	1.00	0.00
25	ATOM	5712	OH2	H2O	2031	19.578	-16.187	6.433	1.00	34.49
	ATOM	5713	H1	H2O	2031	18.984	-16.029	5.679	1.00	0.00
	ATOM	5714	H2	H2O	2031	18.968	-16.183	7.182	1.00	0.00
	ATOM	5715	OH2	H2O	2238	23.558	-17.675	7.540	1.00	52.94
	ATOM	5716	H1	H2O	2238	23.974	-17.229	8.286	1.00	0.00
30	ATOM	5717	H2	H2O	2238	23.895	-18.577	7.600	1.00	0.00
	ATOM	5718	OH2	H2O	2314	23.469	-16.836	3.905	1.00	40.23
	ATOM	5719	H1	H2O	2314	23.490	-17.175	4.811	1.00	0.00
	ATOM	5720	H2	H2O	2314	24.143	-16.139	3.965	1.00	0.00
	ATOM	5721	OH2	H2O	2430	24.508	-16.953	-2.476	1.00	39.10
35	ATOM	5722	H1	H2O	2430	23.560	-16.935	-2.629	1.00	0.00
	ATOM	5723	H2	H2O	2430	24.557	-17.528	-1.683	1.00	0.00
	ATOM	5724	OH2	H2O	2398	31.756	-8.627	-9.918	1.00	31.65
	ATOM	5725	H1	H2O	2398	31.272	-9.319	-10.392	1.00	0.00
	ATOM	5726	H2	H2O	2398	31.395	-8.751	-9.028	1.00	0.00

	ATOM	5727	OH2	H2O	2357	35.235	-6.559	-13.025	1.00	36.71
	ATOM	5728	H1	H2O	2357	35.237	-6.279	-12.103	1.00	0.00
	ATOM	5729	H2	H2O	2357	35.388	-5.723	-13.483	1.00	0.00
	ATOM	5730	OH2	H2O	2096	28.378	0.965	-16.864	1.00	30.28
5	ATOM	5731	H1	H2O	2096	28.314	1.415	-17.728	1.00	0.00
	ATOM	5732	H2	H2O	2096	29.306	1.134	-16.635	1.00	0.00
	ATOM	5733	OH2	H2O	2386	22.098	-15.122	-27.193	1.00	30.97
	ATOM	5734	H1	H2O	2386	22.328	-15.611	-27.986	1.00	0.00
	ATOM	5735	H2	H2O	2386	22.946	-14.810	-26.865	1.00	0.00
10	ATOM	5736	OH2	H2O	2401	19.525	-16.915	-19.140	1.00	60.66
	ATOM	5737	H1	H2O	2401	19.053	-17.603	-18.636	1.00	0.00
	ATOM	5738	H2	H2O	2401	20.414	-17.217	-18.897	1.00	0.00
	ATOM	5739	OH2	H2O	2112	13.236	-6.440	-18.191	1.00	30.00
	ATOM	5740	H1	H2O	2112	12.946	-5.540	-18.395	1.00	0.00
15	ATOM	5741	H2	H2O	2112	14.149	-6.441	-18.482	1.00	0.00
	ATOM	5742	OH2	H2O	2099	16.728	-3.157	-24.065	1.00	31.03
	ATOM	5743	H1	H2O	2099	16.632	-3.797	-23.348	1.00	0.00
	ATOM	5744	H2	H2O	2099	16.491	-3.755	-24.792	1.00	0.00
	ATOM	5745	OH2	H2O	2368	16.789	-13.334	-22.170	1.00	58.09
20	ATOM	5746	H1	H2O	2368	16.718	-13.705	-21.278	1.00	0.00
	ATOM	5747	H2	H2O	2368	17.727	-13.076	-22.156	1.00	0.00
	ATOM	5748	OH2	H2O	2377	29.291	-10.210	-0.300	1.00	50.66
	ATOM	5749	H1	H2O	2377	29.956	-10.411	-0.974	1.00	0.00
	ATOM	5750	H2	H2O	2377	29.866	-9.834	0.395	1.00	0.00
25	ATOM	5751	OH2	H2O	2424	34.504	-6.760	-9.490	1.00	27.48
	ATOM	5752	H1	H2O	2424	34.199	-5.886	-9.757	1.00	0.00
	ATOM	5753	H2	H2O	2424	33.787	-7.317	-9.834	1.00	0.00
	ATOM	5754	OH2	H2O	2023	15.631	5.950	-19.680	1.00	12.26
	ATOM	5755	H1	H2O	2023	16.126	5.955	-18.848	1.00	0.00
30	ATOM	5756	H2	H2O	2023	15.137	5.128	-19.588	1.00	0.00
	ATOM	5757	OH2	H2O	2155	27.699	2.486	-19.359	1.00	26.98
	ATOM	5758	H1	H2O	2155	27.056	3.116	-19.697	1.00	0.00
	ATOM	5759	H2	H2O	2155	27.833	1.887	-20.103	1.00	0.00
	ATOM	5760	OH2	H2O	2040	21.670	7.029	-14.264	1.00	19.72
35	ATOM	5761	H1	H2O	2040	22.395	7.459	-13.806	1.00	0.00
	ATOM	5762	H2	H2O	2040	20.930	7.613	-14.073	1.00	0.00
	ATOM	5763	OH2	H2O	2034	27.535	4.082	-9.593	1.00	11.33
	ATOM	5764	H1	H2O	2034	27.066	4.295	-10.404	1.00	0.00
	ATOM	5765	H2	H2O	2034	27.618	4.944	-9.184	1.00	0.00

	ATOM	5766	OH2	H2O	2146	26.621	3.630	1.891	1.00	30.47
	ATOM	5767	H1	H2O	2146	26.375	3.894	1.000	1.00	0.00
	ATOM	5768	H2	H2O	2146	25.859	3.131	2.201	1.00	0.00
	ATOM	5769	OH2	H2O	2068	20.920	3.904	-3.760	1.00	7.73
5	ATOM	5770	H1	H2O	2068	20.187	4.266	-4.277	1.00	0.00
	ATOM	5771	H2	H2O	2068	20.537	3.848	-2.870	1.00	0.00
	ATOM	5772	OH2	H2O	2364	27.480	-2.239	11.630	1.00	42.03
	ATOM	5773	H1	H2O	2364	28.335	-2.674	11.627	1.00	0.00
	ATOM	5774	H2	H2O	2364	27.679	-1.400	11.186	1.00	0.00
10	ATOM	5775	OH2	H2O	2343	24.938	-3.397	12.441	1.00	63.93
	ATOM	5776	H1	H2O	2343	25.826	-3.111	12.155	1.00	0.00
	ATOM	5777	H2	H2O	2343	24.545	-2.572	12.718	1.00	0.00
	ATOM	5778	OH2	H2O	2113	20.780	9.545	0.873	1.00	21.71
	ATOM	5779	H1	H2O	2113	21.269	10.305	0.549	1.00	0.00
15	ATOM	5780	H2	H2O	2113	21.101	8.844	0.281	1.00	0.00
	ATOM	5781	OH2	H2O	2045	19.024	5.919	-5.656	1.00	15.08
	ATOM	5782	H1	H2O	2045	18.298	5.988	-6.294	1.00	0.00
	ATOM	5783	H2	H2O	2045	19.582	6.638	-5.959	1.00	0.00
	ATOM	5784	OH2	H2O	2054	21.114	5.417	-9.307	1.00	22.18
20	ATOM	5785	H1	H2O	2054	20.193	5.540	-9.064	1.00	0.00
	ATOM	5786	H2	H2O	2054	21.468	4.912	-8.570	1.00	0.00
	ATOM	5787	OH2	H2O	2342	13.713	-6.970	-4.121	1.00	12.52
	ATOM	5788	H1	H2O	2342	14.059	-6.564	-3.321	1.00	0.00
	ATOM	5789	H2	H2O	2342	13.327	-7.788	-3.792	1.00	0.00
25	ATOM	5790	OH2	H2O	2109	13.864	8.376	-3.158	1.00	12.93
	ATOM	5791	H1	H2O	2109	14.640	8.635	-2.622	1.00	0.00
	ATOM	5792	H2	H2O	2109	13.501	7.644	-2.646	1.00	0.00
	ATOM	5793	OH2	H2O	2098	11.925	3.812	-15.931	1.00	18.96
	ATOM	5794	H1	H2O	2098	11.075	3.560	-16.296	1.00	0.00
30	ATOM	5795	H2	H2O	2098	12.285	4.414	-16.600	1.00	0.00
	ATOM	5796	OH2	H2O	2365	9.223	-0.496	-14.217	1.00	54.84
	ATOM	5797	H1	H2O	2365	9.824	-1.238	-14.298	1.00	0.00
	ATOM	5798	H2	H2O	2365	9.151	-0.395	-13.258	1.00	0.00
	ATOM	5799	OH2	H2O	2404	12.428	8.296	-6.209	1.00	9.63
35	ATOM	5800	H1	H2O	2404	13.062	8.041	-5.522	1.00	0.00
	ATOM	5801	H2	H2O	2404	11.618	8.368	-5.696	1.00	0.00
	ATOM	5802	OH2	H2O	2156	12.447	8.353	-8.928	1.00	14.17
	ATOM	5803	H1	H2O	2156	12.431	8.321	-7.945	1.00	0.00
	ATOM	5804	H2	H2O	2156	12.713	9.272	-9.054	1.00	0.00

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	ATOM	5805	OH2	H2O	2423	11.556	21.534	9.898	1.00	47.08
	ATOM	5806	H1	H2O	2423	11.961	21.494	10.776	1.00	0.00
	ATOM	5807	H2	H2O	2423	12.201	21.063	9.362	1.00	0.00
	ATOM	5808	OH2	H2O	2299	16.641	12.291	5.375	1.00	46.28
5	ATOM	5809	H1	H2O	2299	16.261	13.167	5.230	1.00	0.00
	ATOM	5810	H2	H2O	2299	16.480	12.192	6.327	1.00	0.00
	ATOM	5811	OH2	H2O	2232	53.010	-16.149	14.337	1.00	24.27
	ATOM	5812	H1	H2O	2232	52.288	-15.839	14.896	1.00	0.00
	ATOM	5813	H2	H2O	2232	52.553	-16.366	13.518	1.00	0.00
10	ATOM	5814	OH2	H2O	2100	57.480	-6.928	18.196	1.00	40.81
	ATOM	5815	H1	H2O	2100	57.150	-6.086	18.572	1.00	0.00
	ATOM	5816	H2	H2O	2100	56.946	-6.989	17.402	1.00	0.00
	ATOM	5817	OH2	H2O	2111	54.138	-5.214	16.024	1.00	25.96
	ATOM	5818	H1	H2O	2111	53.742	-4.396	15.713	1.00	0.00
15	ATOM	5819	H2	H2O	2111	53.615	-5.424	16.797	1.00	0.00
	ATOM	5820	OH2	H2O	2137	48.495	-20.103	22.150	1.00	23.95
	ATOM	5821	H1	H2O	2137	48.754	-20.324	21.248	1.00	0.00
	ATOM	5822	H2	H2O	2137	47.706	-19.564	22.023	1.00	0.00
	ATOM	5823	OH2	H2O	2018	41.599	-13.711	26.160	1.00	17.34
20	ATOM	5824	H1	H2O	2018	42.183	-14.405	26.481	1.00	0.00
	ATOM	5825	H2	H2O	2018	41.682	-13.790	25.203	1.00	0.00
	ATOM	5826	OH2	H2O	2220	39.734	-11.952	27.025	1.00	13.25
	ATOM	5827	H1	H2O	2220	39.941	-11.999	27.961	1.00	0.00
	ATOM	5828	H2	H2O	2220	40.429	-12.556	26.668	1.00	0.00
25	ATOM	5829	OH2	H2O	2007	38.551	-8.691	27.629	1.00	11.59
	ATOM	5830	H1	H2O	2007	38.595	-9.046	28.528	1.00	0.00
	ATOM	5831	H2	H2O	2007	39.156	-9.276	27.166	1.00	0.00
	ATOM	5832	OH2	H2O	2338	39.902	-21.211	23.898	1.00	42.52
	ATOM	5833	H1	H2O	2338	40.074	-21.614	23.041	1.00	0.00
30	ATOM	5834	H2	H2O	2338	40.667	-20.628	23.991	1.00	0.00
	ATOM	5835	OH2	H2O	2170	37.082	-11.430	19.932	1.00	8.72
	ATOM	5836	H1	H2O	2170	37.916	-10.964	20.031	1.00	0.00
	ATOM	5837	H2	H2O	2170	36.648	-11.216	20.773	1.00	0.00
	ATOM	5838	OH2	H2O	2291	35.762	-12.267	17.716	1.00	29.90
35	ATOM	5839	H1	H2O	2291	35.672	-13.215	17.815	1.00	0.00
	ATOM	5840	H2	H2O	2291	36.292	-12.037	18.513	1.00	0.00
	ATOM	5841	OH2	H2O	2272	39.915	-10.797	17.685	1.00	44.60
	ATOM	5842	H1	H2O	2272	39.983	-10.215	16.922	1.00	0.00
	ATOM	5843	H2	H2O	2272	40.129	-10.212	18.420	1.00	0.00

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	ATOM	5844	OH2	H2O	2197	43.409	-20.674	28.340	1.00	42.19
	ATOM	5845	H1	H2O	2197	43.896	-21.187	27.683	1.00	0.00
	ATOM	5846	H2	H2O	2197	42.571	-21.155	28.384	1.00	0.00
	ATOM	5847	OH2	H2O	2121	39.304	-19.820	27.794	1.00	27.99
5	ATOM	5848	H1	H2O	2121	39.361	-20.164	26.895	1.00	0.00
	ATOM	5849	H2	H2O	2121	38.371	-19.897	27.999	1.00	0.00
	ATOM	5850	OH2	H2O	2407	51.999	-9.716	41.121	1.00	70.95
	ATOM	5851	H1	H2O	2407	52.431	-9.793	41.974	1.00	0.00
	ATOM	5852	H2	H2O	2407	52.746	-9.752	40.505	1.00	0.00
10	ATOM	5853	OH2	H2O	2359	43.346	-4.177	37.568	1.00	42.93
	ATOM	5854	H1	H2O	2359	42.843	-3.822	36.819	1.00	0.00
	ATOM	5855	H2	H2O	2359	43.092	-3.596	38.289	1.00	0.00
	ATOM	5856	OH2	H2O	2391	55.832	-19.332	27.628	1.00	23.55
	ATOM	5857	H1	H2O	2391	55.780	-18.633	26.968	1.00	0.00
15	ATOM	5858	H2	H2O	2391	56.673	-19.147	28.044	1.00	0.00
	ATOM	5859	OH2	H2O	2047	50.968	-7.693	22.248	1.00	96.94
	ATOM	5860	H1	H2O	2047	50.442	-7.529	21.462	1.00	0.00
	ATOM	5861	H2	H2O	2047	51.298	-6.818	22.456	1.00	0.00
	ATOM	5862	OH2	H2O	2055	35.378	-14.080	21.765	1.00	19.87
20	ATOM	5863	H1	H2O	2055	35.625	-14.970	21.492	1.00	0.00
	ATOM	5864	H2	H2O	2055	36.179	-13.577	21.544	1.00	0.00
	ATOM	5865	OH2	H2O	2006	34.501	-16.131	23.435	1.00	11.58
	ATOM	5866	H1	H2O	2006	34.648	-15.191	23.259	1.00	0.00
	ATOM	5867	H2	H2O	2006	34.190	-16.133	24.347	1.00	0.00
25	ATOM	5868	OH2	H2O	2438	44.149	-6.639	36.075	1.00	31.31
	ATOM	5869	H1	H2O	2438	43.202	-6.824	36.071	1.00	0.00
	ATOM	5870	H2	H2O	2438	44.191	-5.912	36.717	1.00	0.00
	ATOM	5871	OH2	H2O	2354	36.028	-4.916	25.879	1.00	29.54
	ATOM	5872	H1	H2O	2354	35.896	-4.591	26.772	1.00	0.00
30	ATOM	5873	H2	H2O	2354	35.939	-5.866	25.990	1.00	0.00
	ATOM	5874	OH2	H2O	2308	33.617	-4.709	31.374	1.00	21.34
	ATOM	5875	H1	H2O	2308	34.430	-5.022	31.830	1.00	0.00
	ATOM	5876	H2	H2O	2308	33.358	-3.976	31.956	1.00	0.00
	ATOM	5877	OH2	H2O	2420	37.905	7.003	18.893	1.00	37.09
35	ATOM	5878	H1	H2O	2420	38.486	6.250	19.034	1.00	0.00
	ATOM	5879	H2	H2O	2420	38.528	7.722	18.774	1.00	0.00
	ATOM	5880	OH2	H2O	2185	41.075	7.225	20.364	1.00	48.82
	ATOM	5881	H1	H2O	2185	40.346	7.335	20.976	1.00	0.00
	ATOM	5882	H2	H2O	2185	41.785	6.958	20.967	1.00	0.00

	ATOM	5883	OH2	H2O	2402	57.143	-2.340	11.369	1.00	27.22
	ATOM	5884	H1	H2O	2402	57.652	-1.628	11.759	1.00	0.00
	ATOM	5885	H2	H2O	2402	56.387	-1.842	10.998	1.00	0.00
	ATOM	5886	OH2	H2O	2090	58.792	-4.704	21.220	1.00	45.35
5	ATOM	5887	H1	H2O	2090	59.176	-4.804	22.105	1.00	0.00
	ATOM	5888	H2	H2O	2090	59.358	-5.288	20.706	1.00	0.00
	ATOM	5889	OH2	H2O	2214	61.585	1.744	22.791	1.00	66.01
	ATOM	5890	H1	H2O	2214	60.908	1.086	22.576	1.00	0.00
	ATOM	5891	H2	H2O	2214	61.115	2.206	23.499	1.00	0.00
10	ATOM	5892	OH2	H2O	2180	47.497	-23.533	21.262	1.00	19.46
	ATOM	5893	H1	H2O	2180	48.118	-24.053	20.714	1.00	0.00
	ATOM	5894	H2	H2O	2180	47.939	-22.672	21.265	1.00	0.00
	ATOM	5895	OH2	H2O	2208	45.577	-25.548	24.777	1.00	34.69
	ATOM	5896	H1	H2O	2208	44.707	-25.952	24.684	1.00	0.00
15	ATOM	5897	H2	H2O	2208	46.149	-26.159	24.313	1.00	0.00
	ATOM	5898	OH2	H2O	2033	24.690	-14.893	21.736	1.00	5.32
	ATOM	5899	H1	H2O	2033	25.308	-15.101	21.006	1.00	0.00
	ATOM	5900	H2	H2O	2033	24.598	-13.934	21.584	1.00	0.00
	ATOM	5901	OH2	H2O	2160	30.810	-9.362	1.806	1.00	63.50
20	ATOM	5902	H1	H2O	2160	31.326	-8.858	2.443	1.00	0.00
	ATOM	5903	H2	H2O	2160	30.705	-10.213	2.259	1.00	0.00
	ATOM	5904	OH2	H2O	2194	31.416	-15.610	7.447	1.00	65.23
	ATOM	5905	H1	H2O	2194	31.229	-16.277	6.772	1.00	0.00
	ATOM	5906	H2	H2O	2194	32.035	-15.023	7.010	1.00	0.00
25	ATOM	5907	OH2	H2O	2370	31.999	-15.570	12.535	1.00	24.67
	ATOM	5908	H1	H2O	2370	32.407	-16.359	12.895	1.00	0.00
	ATOM	5909	H2	H2O	2370	31.786	-15.803	11.629	1.00	0.00
	ATOM	5910	OH2	H2O	2136	29.123	-28.115	11.438	1.00	35.74
	ATOM	5911	H1	H2O	2136	29.011	-28.804	10.776	1.00	0.00
30	ATOM	5912	H2	H2O	2136	28.613	-27.383	11.083	1.00	0.00
	ATOM	5913	OH2	H2O	2030	23.452	-11.832	22.557	1.00	10.50
	ATOM	5914	H1	H2O	2030	22.530	-11.594	22.374	1.00	0.00
	ATOM	5915	H2	H2O	2030	23.864	-10.993	22.317	1.00	0.00
	ATOM	5916	OH2	H2O	2412	20.673	-7.099	20.940	1.00	56.26
35	ATOM	5917	H1	H2O	2412	20.237	-7.012	21.808	1.00	0.00
	ATOM	5918	H2	H2O	2412	20.180	-6.433	20.446	1.00	0.00
	ATOM	5919	OH2	H2O	2089	15.819	-22.003	23.299	1.00	35.26
	ATOM	5920	H1	H2O	2089	15.795	-22.742	22.683	1.00	0.00
	ATOM	5921	H2	H2O	2089	16.771	-21.953	23.470	1.00	0.00

	ATOM	5922	OH2	H2O	2072	11.320	-15.295	32.192	1.00	20.48
	ATOM	5923	H1	H2O	2072	11.654	-15.091	31.308	1.00	0.00
	ATOM	5924	H2	H2O	2072	11.384	-16.258	32.186	1.00	0.00
	ATOM	5925	OH2	H2O	2316	10.042	-12.494	33.237	1.00	24.17
5	ATOM	5926	H1	H2O	2316	10.406	-13.370	32.999	1.00	0.00
	ATOM	5927	H2	H2O	2316	10.289	-12.453	34.164	1.00	0.00
	ATOM	5928	OH2	H2O	2399	8.603	-14.948	35.233	1.00	23.99
	ATOM	5929	H1	H2O	2399	8.313	-14.487	36.053	1.00	0.00
	ATOM	5930	H2	H2O	2399	8.473	-14.262	34.569	1.00	0.00
10	ATOM	5931	OH2	H2O	2192	7.916	-13.636	37.451	1.00	70.33
	ATOM	5932	H1	H2O	2192	7.104	-13.217	37.761	1.00	0.00
	ATOM	5933	H2	H2O	2192	8.601	-13.075	37.836	1.00	0.00
	ATOM	5934	OH2	H2O	2231	8.067	-13.460	23.591	1.00	38.21
	ATOM	5935	H1	H2O	2231	8.632	-14.192	23.328	1.00	0.00
15	ATOM	5936	H2	H2O	2231	7.984	-12.955	22.777	1.00	0.00
	ATOM	5937	OH2	H2O	2161	16.836	-33.080	34.391	1.00	54.29
	ATOM	5938	H1	H2O	2161	16.968	-33.045	35.343	1.00	0.00
	ATOM	5939	H2	H2O	2161	17.012	-32.166	34.136	1.00	0.00
	ATOM	5940	OH2	H2O	2140	26.971	-29.009	44.630	1.00	9.87
20	ATOM	5941	H1	H2O	2140	26.721	-29.930	44.498	1.00	0.00
	ATOM	5942	H2	H2O	2140	27.184	-28.985	45.569	1.00	0.00
	ATOM	5943	OH2	H2O	2246	23.752	-26.455	45.524	1.00	8.02
	ATOM	5944	H1	H2O	2246	24.151	-27.078	46.149	1.00	0.00
	ATOM	5945	H2	H2O	2246	23.459	-27.079	44.834	1.00	0.00
25	ATOM	5946	OH2	H2O	2440	13.303	-10.401	26.635	1.00	52.80
	ATOM	5947	H1	H2O	2440	13.963	-10.537	27.326	1.00	0.00
	ATOM	5948	H2	H2O	2440	12.478	-10.553	27.125	1.00	0.00
	ATOM	5949	OH2	H2O	2331	15.775	-24.807	48.886	1.00	17.34
	ATOM	5950	H1	H2O	2331	16.212	-25.108	48.074	1.00	0.00
30	ATOM	5951	H2	H2O	2331	16.323	-24.056	49.119	1.00	0.00
	ATOM	5952	OH2	H2O	2070	15.042	-18.872	44.584	1.00	18.63
	ATOM	5953	H1	H2O	2070	15.952	-18.620	44.779	1.00	0.00
	ATOM	5954	H2	H2O	2070	14.605	-18.849	45.437	1.00	0.00
	ATOM	5955	OH2	H2O	2271	17.717	-14.518	46.249	1.00	47.83
35	ATOM	5956	H1	H2O	2271	17.672	-14.366	45.294	1.00	0.00
	ATOM	5957	H2	H2O	2271	17.046	-15.189	46.389	1.00	0.00
	ATOM	5958	OH2	H2O	2379	25.821	-12.138	44.278	1.00	32.22
	ATOM	5959	H1	H2O	2379	26.013	-11.483	43.596	1.00	0.00
	ATOM	5960	H2	H2O	2379	25.466	-11.558	44.966	1.00	0.00

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	ATOM	5961	OH2	H2O	2108	20.565	-8.761	39.099	1.00	2.25
	ATOM	5962	H1	H2O	2108	21.504	-8.707	39.314	1.00	0.00
	ATOM	5963	H2	H2O	2108	20.219	-8.866	39.994	1.00	0.00
	ATOM	5964	OH2	H2O	2328	24.406	-6.118	40.654	1.00	14.45
5	ATOM	5965	H1	H2O	2328	23.863	-5.355	40.422	1.00	0.00
	ATOM	5966	H2	H2O	2328	25.189	-5.982	40.110	1.00	0.00
	ATOM	5967	OH2	H2O	2425	21.666	-3.377	40.429	1.00	52.73
	ATOM	5968	H1	H2O	2425	21.213	-3.720	41.201	1.00	0.00
	ATOM	5969	H2	H2O	2425	20.930	-3.079	39.862	1.00	0.00
10	ATOM	5970	OH2	H2O	2205	21.184	-1.374	23.368	1.00	17.33
	ATOM	5971	H1	H2O	2205	20.516	-1.305	24.082	1.00	0.00
	ATOM	5972	H2	H2O	2205	20.771	-1.991	22.764	1.00	0.00
	ATOM	5973	OH2	H2O	2362	19.416	-1.273	25.451	1.00	28.10
	ATOM	5974	H1	H2O	2362	20.154	-0.939	25.985	1.00	0.00
15	ATOM	5975	H2	H2O	2362	18.683	-1.148	26.064	1.00	0.00
	ATOM	5976	OH2	H2O	2061	24.677	1.554	32.306	1.00	11.86
	ATOM	5977	H1	H2O	2061	24.757	0.836	32.940	1.00	0.00
	ATOM	5978	H2	H2O	2061	24.437	2.296	32.864	1.00	0.00
	ATOM	5979	OH2	H2O	2119	27.988	-8.763	33.829	1.00	17.60
20	ATOM	5980	H1	H2O	2119	28.536	-8.635	33.040	1.00	0.00
	ATOM	5981	H2	H2O	2119	28.598	-9.196	34.463	1.00	0.00
	ATOM	5982	OH2	H2O	2348	32.711	-3.156	40.465	1.00	16.04
	ATOM	5983	H1	H2O	2348	32.068	-3.312	39.768	1.00	0.00
	ATOM	5984	H2	H2O	2348	33.008	-4.037	40.705	1.00	0.00
25	ATOM	5985	OH2	H2O	2312	32.395	-3.078	33.580	1.00	31.42
	ATOM	5986	H1	H2O	2312	31.958	-3.871	33.911	1.00	0.00
	ATOM	5987	H2	H2O	2312	31.799	-2.392	33.903	1.00	0.00
	ATOM	5988	OH2	H2O	2344	33.317	0.119	30.693	1.00	56.56
	ATOM	5989	H1	H2O	2344	34.118	-0.155	31.142	1.00	0.00
30	ATOM	5990	H2	H2O	2344	32.652	-0.479	31.039	1.00	0.00
	ATOM	5991	OH2	H2O	2333	35.576	-5.496	33.034	1.00	18.08
	ATOM	5992	H1	H2O	2333	35.635	-6.428	33.271	1.00	0.00
	ATOM	5993	H2	H2O	2333	35.578	-5.071	33.898	1.00	0.00
	ATOM	5994	OH2	H2O	2077	33.384	-15.305	26.976	1.00	20.62
35	ATOM	5995	H1	H2O	2077	33.638	-14.532	26.459	1.00	0.00
	ATOM	5996	H2	H2O	2077	32.779	-14.932	27.622	1.00	0.00
	ATOM	5997	OH2	H2O	2172	26.897	-25.114	28.985	1.00	30.56
	ATOM	5998	H1	H2O	2172	27.153	-24.490	28.305	1.00	0.00
	ATOM	5999	H2	H2O	2172	27.491	-24.907	29.710	1.00	0.00

	ATOM	6000	OH2	H2O	2446	44.010	-15.901	36.613	1.00	37.57
	ATOM	6001	H1	H2O	2446	44.830	-15.428	36.448	1.00	0.00
	ATOM	6002	H2	H2O	2446	44.123	-16.235	37.506	1.00	0.00
	ATOM	6003	OH2	H2O	2433	38.438	-17.405	38.176	1.00	48.29
5	ATOM	6004	H1	H2O	2433	39.273	-17.807	37.928	1.00	0.00
	ATOM	6005	H2	H2O	2433	37.797	-17.920	37.666	1.00	0.00
	ATOM	6006	OH2	H2O	2067	29.531	-9.895	35.716	1.00	14.12
	ATOM	6007	H1	H2O	2067	29.864	-9.637	36.590	1.00	0.00
	ATOM	6008	H2	H2O	2067	29.434	-10.847	35.846	1.00	0.00
10	ATOM	6009	OH2	H2O	2321	35.644	-17.632	40.417	1.00	20.37
	ATOM	6010	H1	H2O	2321	35.574	-18.582	40.274	1.00	0.00
	ATOM	6011	H2	H2O	2321	36.571	-17.459	40.197	1.00	0.00
	ATOM	6012	OH2	H2O	2062	24.202	-17.470	37.624	1.00	45.80
	ATOM	6013	H1	H2O	2062	24.163	-18.245	37.065	1.00	0.00
15	ATOM	6014	H2	H2O	2062	25.140	-17.311	37.751	1.00	0.00
	ATOM	6015	OH2	H2O	2120	13.699	-5.868	38.824	1.00	30.28
	ATOM	6016	H1	H2O	2120	14.554	-6.277	39.001	1.00	0.00
	ATOM	6017	H2	H2O	2120	13.728	-5.092	39.392	1.00	0.00
	ATOM	6018	OH2	H2O	2154	9.242	-14.997	28.355	1.00	24.97
20	ATOM	6019	H1	H2O	2154	9.669	-14.959	27.498	1.00	0.00
	ATOM	6020	H2	H2O	2154	9.793	-15.603	28.854	1.00	0.00
	ATOM	6021	OH2	H2O	2249	25.464	-8.982	47.160	1.00	21.25
	ATOM	6022	H1	H2O	2249	25.372	-8.692	48.068	1.00	0.00
	ATOM	6023	H2	H2O	2249	25.631	-8.176	46.668	1.00	0.00
25	ATOM	6024	OH2	H2O	2300	29.028	-2.245	34.431	1.00	41.04
	ATOM	6025	H1	H2O	2300	29.282	-3.175	34.367	1.00	0.00
	ATOM	6026	H2	H2O	2300	28.487	-2.123	33.650	1.00	0.00
	ATOM	6027	OH2	H2O	2204	33.950	-9.271	48.503	1.00	28.17
	ATOM	6028	H1	H2O	2204	33.742	-9.522	49.406	1.00	0.00
30	ATOM	6029	H2	H2O	2204	33.127	-9.462	48.040	1.00	0.00
	ATOM	6030	OH2	H2O	2288	40.485	-9.257	37.985	1.00	13.77
	ATOM	6031	H1	H2O	2288	41.241	-9.027	37.430	1.00	0.00
	ATOM	6032	H2	H2O	2288	40.854	-9.285	38.872	1.00	0.00
	ATOM	6033	OH2	H2O	2141	40.365	-14.937	30.859	1.00	20.91
35	ATOM	6034	H1	H2O	2141	40.009	-14.090	31.144	1.00	0.00
	ATOM	6035	H2	H2O	2141	39.970	-15.022	29.984	1.00	0.00
	ATOM	6036	OH2	H2O	2101	45.271	6.055	35.780	1.00	63.28
	ATOM	6037	H1	H2O	2101	45.897	6.745	35.495	1.00	0.00
	ATOM	6038	H2	H2O	2101	45.071	5.698	34.903	1.00	0.00

	ATOM	6039	OH2	H2O	2010	32.554	4.915	-4.911	1.00	28.06
	ATOM	6040	H1	H2O	2010	32.927	5.785	-4.780	1.00	0.00
	ATOM	6041	H2	H2O	2010	32.828	4.445	-4.101	1.00	0.00
	ATOM	6042	OH2	H2O	2015	21.877	-20.746	49.067	1.00	8.80
5	ATOM	6043	H1	H2O	2015	22.711	-20.839	49.547	1.00	0.00
	ATOM	6044	H2	H2O	2015	22.034	-21.259	48.267	1.00	0.00
	ATOM	6045	OH2	H2O	3191	-3.078	-4.252	10.967	1.00	16.19
	ATOM	6046	H1	H2O	3191	-3.469	-3.684	11.636	1.00	0.00
	ATOM	6047	H2	H2O	3191	-3.834	-4.669	10.551	1.00	0.00
10	ATOM	6048	OH2	H2O	3147	8.060	-4.377	9.828	1.00	16.74
	ATOM	6049	H1	H2O	3147	8.121	-4.590	10.768	1.00	0.00
	ATOM	6050	H2	H2O	3147	8.142	-5.258	9.435	1.00	0.00
	ATOM	6051	OH2	H2O	3098	5.207	8.717	-7.692	1.00	30.64
	ATOM	6052	H1	H2O	3098	4.246	8.849	-7.841	1.00	0.00
15	ATOM	6053	H2	H2O	3098	5.523	8.644	-8.595	1.00	0.00
	ATOM	6054	OH2	H2O	3156	2.425	9.047	-8.391	1.00	29.49
	ATOM	6055	H1	H2O	3156	1.889	8.446	-8.916	1.00	0.00
	ATOM	6056	H2	H2O	3156	1.733	9.656	-8.061	1.00	0.00
	ATOM	6057	OH2	H2O	3104	9.654	2.444	-4.630	1.00	38.50
20	ATOM	6058	H1	H2O	3104	9.692	3.402	-4.681	1.00	0.00
	ATOM	6059	H2	H2O	3104	10.346	2.182	-5.249	1.00	0.00
	ATOM	6060	OH2	H2O	3212	15.589	9.732	-1.575	1.00	19.23
	ATOM	6061	H1	H2O	3212	14.759	10.169	-1.343	1.00	0.00
	ATOM	6062	H2	H2O	3212	16.112	10.516	-1.784	1.00	0.00
25	ATOM	6063	OH2	H2O	3181	-3.743	1.638	1.512	1.00	27.00
	ATOM	6064	H1	H2O	3181	-2.961	1.156	1.243	1.00	0.00
	ATOM	6065	H2	H2O	3181	-4.400	1.099	1.016	1.00	0.00
	ATOM	6066	OH2	H2O	3019	-4.806	-0.424	0.257	1.00	26.95
	ATOM	6067	H1	H2O	3019	-4.368	-1.251	0.014	1.00	0.00
30	ATOM	6068	H2	H2O	3019	-5.295	-0.744	1.049	1.00	0.00
	ATOM	6069	OH2	H2O	3178	-5.835	-1.383	2.620	1.00	25.81
	ATOM	6070	H1	H2O	3178	-5.525	-2.113	3.165	1.00	0.00
	ATOM	6071	H2	H2O	3178	-5.630	-0.630	3.204	1.00	0.00
	ATOM	6072	OH2	H2O	3141	31.801	-27.442	2.541	1.00	42.64
35	ATOM	6073	H1	H2O	3141	31.519	-27.882	1.730	1.00	0.00
	ATOM	6074	H2	H2O	3141	32.479	-28.053	2.863	1.00	0.00
	ATOM	6075	OH2	H2O	3125	0.814	26.814	11.397	1.00	42.53
	ATOM	6076	H1	H2O	3125	0.885	27.670	11.830	1.00	0.00
	ATOM	6077	H2	H2O	3125	-0.088	26.558	11.618	1.00	0.00

	ATOM	6078	OH2	H2O	3013	8.353	-1.014	13.721	1.00	39.02
	ATOM	6079	H1	H2O	3013	9.135	-0.527	13.410	1.00	0.00
	ATOM	6080	H2	H2O	3013	7.943	-1.259	12.884	1.00	0.00
	ATOM	6081	OH2	H2O	3029	16.903	3.887	5.300	1.00	15.87
5	ATOM	6082	H1	H2O	3029	16.700	3.026	5.691	1.00	0.00
	ATOM	6083	H2	H2O	3029	16.844	3.720	4.351	1.00	0.00
	ATOM	6084	OH2	H2O	3064	8.191	20.675	1.300	1.00	33.79
	ATOM	6085	H1	H2O	3064	8.643	21.164	0.604	1.00	0.00
	ATOM	6086	H2	H2O	3064	7.835	19.914	0.829	1.00	0.00
10	ATOM	6087	OH2	H2O	3090	-2.265	27.363	13.784	1.00	57.66
	ATOM	6088	H1	H2O	3090	-2.320	26.647	14.421	1.00	0.00
	ATOM	6089	H2	H2O	3090	-3.039	27.231	13.231	1.00	0.00
	ATOM	6090	OH2	H2O	3199	17.013	1.765	10.108	1.00	33.28
	ATOM	6091	H1	H2O	3199	17.299	1.776	11.032	1.00	0.00
15	ATOM	6092	H2	H2O	3199	17.836	1.578	9.644	1.00	0.00
	ATOM	6093	OH2	H2O	3058	19.287	-2.958	9.801	1.00	35.84
	ATOM	6094	H1	H2O	3058	19.593	-3.850	10.036	1.00	0.00
	ATOM	6095	H2	H2O	3058	19.775	-2.798	8.991	1.00	0.00
	ATOM	6096	OH2	H2O	3223	-9.812	-0.517	10.459	1.00	66.07
20	ATOM	6097	H1	H2O	3223	-9.918	0.387	10.100	1.00	0.00
	ATOM	6098	H2	H2O	3223	-10.701	-0.862	10.362	1.00	0.00
	ATOM	6099	OH2	H2O	3194	24.050	-18.614	-0.304	1.00	32.20
	ATOM	6100	H1	H2O	3194	23.909	-19.568	-0.359	1.00	0.00
	ATOM	6101	H2	H2O	3194	23.458	-18.365	0.415	1.00	0.00
25	ATOM	6102	OH2	H2O	3137	18.552	-14.358	-19.355	1.00	64.23
	ATOM	6103	H1	H2O	3137	19.371	-13.903	-19.578	1.00	0.00
	ATOM	6104	H2	H2O	3137	18.856	-15.295	-19.328	1.00	0.00
	ATOM	6105	OH2	H2O	3108	22.639	14.497	-11.334	1.00	51.77
	ATOM	6106	H1	H2O	3108	22.763	14.199	-12.248	1.00	0.00
30	ATOM	6107	H2	H2O	3108	23.235	13.880	-10.879	1.00	0.00
	ATOM	6108	OH2	H2O	3091	56.601	-4.492	19.249	1.00	48.51
	ATOM	6109	H1	H2O	3091	57.268	-4.523	19.963	1.00	0.00
	ATOM	6110	H2	H2O	3091	56.163	-3.659	19.474	1.00	0.00
	ATOM	6111	OH2	H2O	3017	47.313	-10.322	26.171	1.00	102.08
35	ATOM	6112	H1	H2O	3017	48.025	-10.044	25.576	1.00	0.00
	ATOM	6113	H2	H2O	3017	46.553	-10.276	25.584	1.00	0.00
	ATOM	6114	OH2	H2O	3117	36.098	1.714	21.377	1.00	39.42
	ATOM	6115	H1	H2O	3117	35.588	0.898	21.398	1.00	0.00
	ATOM	6116	H2	H2O	3117	35.861	2.135	22.207	1.00	0.00

	ATOM	6117	OH2	H2O	3200	9.862	-19.643	45.852	1.00	43.84
	ATOM	6118	H1	H2O	3200	9.445	-19.512	44.999	1.00	0.00
	ATOM	6119	H2	H2O	3200	9.166	-19.458	46.485	1.00	0.00
	ATOM	6120	OH2	H2O	3040	28.246	-22.043	26.268	1.00	21.05
5	ATOM	6121	H1	H2O	3040	29.090	-22.212	25.842	1.00	0.00
	ATOM	6122	H2	H2O	3040	28.110	-21.103	26.103	1.00	0.00
	ATOM	6123	OH2	H2O	3047	32.378	-20.251	42.121	1.00	20.98
	ATOM	6124	H1	H2O	3047	32.631	-19.373	42.435	1.00	0.00
	ATOM	6125	H2	H2O	3047	32.745	-20.828	42.799	1.00	0.00
10	ATOM	6126	OH2	H2O	3061	26.628	-27.624	38.628	1.00	16.19
	ATOM	6127	H1	H2O	3061	25.753	-27.319	38.895	1.00	0.00
	ATOM	6128	H2	H2O	3061	27.210	-27.114	39.215	1.00	0.00
	ATOM	6129	OH2	H2O	3206	15.002	-7.120	42.223	1.00	29.38
	ATOM	6130	H1	H2O	3206	14.082	-7.406	42.327	1.00	0.00
15	ATOM	6131	H2	H2O	3206	15.150	-6.557	42.986	1.00	0.00
	ATOM	6132	OH2	H2O	3045	41.800	-16.544	33.852	1.00	33.08
	ATOM	6133	H1	H2O	3045	40.959	-16.083	33.908	1.00	0.00
	ATOM	6134	H2	H2O	3045	42.155	-16.453	34.748	1.00	0.00
	END									

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*Note: See copyright notice on page 1.

Appendix IV: Coordinates for the 3D structure of SYK-C:peptide complex

5	created by user: dave										
10	ATOM	1	N	THR	1	4.888	9.383	9.370	1.00	1.25	PEP
	ATOM	2	HN	THR	1	4.897	8.671	10.072	1.00	1.30	PEP
	ATOM	3	CA	THR	1	5.664	9.239	8.157	1.00	1.17	PEP
	ATOM	4	HA	THR	1	6.160	10.195	7.974	1.00	1.22	PEP
	ATOM	5	CB	THR	1	6.679	8.116	8.338	1.00	1.23	PEP
	ATOM	6	HB	THR	1	6.327	7.446	9.117	1.00	1.29	PEP
	ATOM	7	OG1	THR	1	7.908	8.651	8.766	1.00	1.37	PEP
	ATOM	8	HG1	THR	1	8.091	8.269	9.614	1.00	1.72	PEP
	ATOM	9	CG2	THR	1	6.889	7.323	7.048	1.00	1.13	PEP
15	ATOM	10	HG21	THR	1	6.764	7.967	6.175	1.00	1.37	PEP
	ATOM	11	HG22	THR	1	7.885	6.893	7.012	1.00	1.59	PEP
	ATOM	12	HG23	THR	1	6.165	6.511	6.970	1.00	1.49	PEP
	ATOM	13	C	THR	1	4.724	8.926	6.998	1.00	1.00	PEP
20	ATOM	14	O	THR	1	4.484	7.776	6.650	1.00	0.99	PEP
	ATOM	15	CT2	THR	1	3.263	10.438	10.767	1.00	1.39	PEP
	ATOM	16	HT21	THR	1	2.897	9.423	10.918	1.00	1.48	PEP
	ATOM	17	HT22	THR	1	3.830	10.744	11.645	1.00	1.89	PEP
	ATOM	18	HT23	THR	1	2.412	11.106	10.644	1.00	1.82	PEP
25	ATOM	19	CNT	THR	1	4.150	10.492	9.528	1.00	1.28	PEP
	ATOM	20	ONT	THR	1	4.157	11.458	8.775	1.00	1.27	PEP
	ATOM	21	N	PTYR	2	4.187	10.014	6.438	1.00	0.94	PEP
	ATOM	22	HN	PTYR	2	4.382	10.915	6.792	1.00	1.03	PEP
	ATOM	23	CA	PTYR	2	3.272	9.812	5.331	1.00	0.82	PEP
30	ATOM	24	HA	PTYR	2	3.596	8.897	4.834	1.00	0.77	PEP
	ATOM	25	CB	PTYR	2	1.861	9.638	5.864	1.00	0.82	PEP
	ATOM	26	HB1	PTYR	2	1.549	10.512	6.435	1.00	0.91	PEP
	ATOM	27	HB2	PTYR	2	1.151	9.496	5.049	1.00	0.76	PEP
	ATOM	28	CG	PTYR	2	1.861	8.447	6.740	1.00	0.84	PEP
35	ATOM	29	CD1	PTYR	2	1.804	7.154	6.171	1.00	0.75	PEP
	ATOM	30	HD1	PTYR	2	1.650	7.036	5.110	1.00	0.67	PEP
	ATOM	31	CE1	PTYR	2	1.984	6.023	6.974	1.00	0.82	PEP
	ATOM	32	HE1	PTYR	2	1.976	5.051	6.522	1.00	0.78	PEP
	ATOM	33	CD2	PTYR	2	2.091	8.598	8.127	1.00	1.00	PEP
	ATOM	34	HD2	PTYR	2	2.160	9.584	8.557	1.00	1.09	PEP

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	ATOM	35	CE2	PTYR	2	2.275	7.471	8.938	1.00	1.06	PEP
	ATOM	36	HE2	PTYR	2	2.506	7.601	9.977	1.00	1.20	PEP
	ATOM	37	CZ	PTYR	2	2.218	6.185	8.359	1.00	0.97	PEP
	ATOM	38	OH	PTYR	2	2.396	5.057	9.180	1.00	1.07	PEP
5	ATOM	39	PO4	PTYR	2	2.748	3.685	8.518	1.00	1.77	PEP
	ATOM	40	OC1	PTYR	2	1.375	3.038	8.201	1.00	2.43	PEP
	ATOM	41	OC2	PTYR	2	3.442	2.874	9.642	1.00	2.32	PEP
	ATOM	42	OT	PTYR	2	3.609	3.836	7.299	1.00	2.72	PEP
	ATOM	43	C	PTYR	2	3.336	10.946	4.334	1.00	0.81	PEP
10	ATOM	44	O	PTYR	2	2.857	12.052	4.556	1.00	0.95	PEP
	ATOM	45	N	GLU	3	3.965	10.574	3.218	1.00	0.77	PEP
	ATOM	46	HN	GLU	3	4.351	9.647	3.139	1.00	0.83	PEP
	ATOM	47	CA	GLU	3	4.074	11.530	2.143	1.00	0.78	PEP
	ATOM	48	HA	GLU	3	4.702	12.335	2.480	1.00	0.88	PEP
15	ATOM	49	CB	GLU	3	4.684	10.868	0.932	1.00	0.74	PEP
	ATOM	50	HB1	GLU	3	4.092	10.004	0.646	1.00	0.73	PEP
	ATOM	51	HB2	GLU	3	4.669	11.558	0.089	1.00	0.82	PEP
	ATOM	52	CG	GLU	3	6.115	10.435	1.220	1.00	0.91	PEP
	ATOM	53	HG1	GLU	3	6.134	9.445	1.669	1.00	1.30	PEP
20	ATOM	54	HG2	GLU	3	6.666	10.389	0.306	1.00	1.26	PEP
	ATOM	55	CD	GLU	3	6.811	11.423	2.161	1.00	1.64	PEP
	ATOM	56	OE1	GLU	3	7.497	12.317	1.671	1.00	2.20	PEP
	ATOM	57	OE2	GLU	3	6.658	11.284	3.374	1.00	2.38	PEP
	ATOM	58	C	GLU	3	2.683	12.066	1.850	1.00	0.76	PEP
25	ATOM	59	O	GLU	3	1.683	11.545	2.327	1.00	0.74	PEP
	ATOM	60	N	THR	4	2.676	13.136	1.047	1.00	0.80	PEP
	ATOM	61	HN	THR	4	3.522	13.511	0.673	1.00	0.86	PEP
	ATOM	62	CA	THR	4	1.393	13.722	0.739	1.00	0.78	PEP
	ATOM	63	HA	THR	4	0.670	13.269	1.432	1.00	0.75	PEP
30	ATOM	64	CB	THR	4	1.459	15.232	0.916	1.00	0.90	PEP
	ATOM	65	HB	THR	4	0.752	15.698	0.241	1.00	1.28	PEP
	ATOM	66	OG1	THR	4	2.741	15.694	0.561	1.00	1.59	PEP
	ATOM	67	HG1	THR	4	2.614	16.446	-0.002	1.00	2.03	PEP
	ATOM	68	CG2	THR	4	1.145	15.651	2.353	1.00	1.71	PEP
35	ATOM	69	HG21	THR	4	1.866	15.224	3.049	1.00	2.14	PEP
	ATOM	70	HG22	THR	4	0.151	15.313	2.647	1.00	2.33	PEP
	ATOM	71	HG23	THR	4	1.176	16.735	2.458	1.00	2.26	PEP
	ATOM	72	C	THR	4	0.969	13.357	-0.668	1.00	0.72	PEP
	ATOM	73	O	THR	4	1.550	13.759	-1.668	1.00	0.77	PEP

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	ATOM	74	N	LEU	5	-0.094	12.553	-0.635	1.00	0.65	PEP
	ATOM	75	HN	LEU	5	-0.485	12.282	0.242	1.00	0.67	PEP
	ATOM	76	HA	LEU	5	0.126	11.614	-2.443	1.00	0.63	PEP
	ATOM	77	CB	LEU	5	-1.709	11.032	-1.462	1.00	0.59	PEP
5	ATOM	78	HB1	LEU	5	-1.792	10.968	-0.376	1.00	0.64	PEP
	ATOM	79	HB2	LEU	5	-2.682	11.326	-1.842	1.00	0.68	PEP
	ATOM	80	CG	LEU	5	-1.318	9.692	-2.026	1.00	0.46	PEP
	ATOM	81	HG	LEU	5	-0.240	9.683	-2.166	1.00	0.52	PEP
	ATOM	82	CD1	LEU	5	-1.705	8.560	-1.097	1.00	0.42	PEP
10	ATOM	83	HD11	LEU	5	-2.721	8.227	-1.304	1.00	1.11	PEP
	ATOM	84	HD12	LEU	5	-1.037	7.710	-1.230	1.00	1.12	PEP
	ATOM	85	HD13	LEU	5	-1.654	8.878	-0.060	1.00	1.10	PEP
	ATOM	86	CD2	LEU	5	-1.988	9.514	-3.356	1.00	0.52	PEP
	ATOM	87	HD21	LEU	5	-2.029	10.457	-3.888	1.00	1.11	PEP
15	ATOM	88	HD22	LEU	5	-1.451	8.810	-3.959	1.00	1.26	PEP
	ATOM	89	HD23	LEU	5	-3.002	9.149	-3.225	1.00	1.00	PEP
	ATOM	90	C	LEU	5	-1.322	13.231	-2.604	1.00	0.72	PEP
	ATOM	91	O	LEU	5	-2.536	13.382	-2.640	1.00	1.31	PEP
	ATOM	92	NCT	LEU	5	-0.427	14.037	-3.203	1.00	1.13	PEP
20	ATOM	93	HCT1	LEU	5	0.554	13.850	-3.136	1.00	1.72	PEP
	ATOM	94	HCT2	LEU	5	-0.727	14.836	-3.724	1.00	1.61	PEP
	ATOM	95	CA	LEU	5	-0.675	12.071	-1.845	1.00	0.63	PEP
	ATOM	96	N	GLY	1	-21.702	-18.923	0.217	1.00	11.53	ACSY
	ATOM	97	HT1	GLY	1	-21.532	-19.938	0.069	1.00	11.78	ACSY
25	ATOM	98	HT2	GLY	1	-21.935	-18.753	1.216	1.00	11.73	ACSY
	ATOM	99	HT3	GLY	1	-22.495	-18.614	-0.381	1.00	11.61	ACSY
	ATOM	100	CA	GLY	1	-20.504	-18.172	-0.138	1.00	11.06	ACSY
	ATOM	101	HA1	GLY	1	-20.709	-17.110	0.000	1.00	11.33	ACSY
	ATOM	102	HA2	GLY	1	-20.287	-18.347	-1.191	1.00	11.13	ACSY
30	ATOM	103	C	GLY	1	-19.296	-18.576	0.710	1.00	10.41	ACSY
	ATOM	104	O	GLY	1	-18.259	-18.988	0.205	1.00	10.65	ACSY
	ATOM	105	N	SER	2	-19.508	-18.427	2.030	1.00	9.79	ACSY
	ATOM	106	HN	SER	2	-20.383	-18.084	2.371	1.00	9.80	ACSY
	ATOM	107	CA	SER	2	-18.439	-18.776	2.950	1.00	9.36	ACSY
35	ATOM	108	HA	SER	2	-18.713	-18.382	3.932	1.00	9.73	ACSY
	ATOM	109	CB	SER	2	-18.285	-20.294	2.997	1.00	9.43	ACSY
	ATOM	110	HB1	SER	2	-17.509	-20.584	3.707	1.00	9.49	ACSY
	ATOM	111	HB2	SER	2	-19.216	-20.770	3.304	1.00	9.38	ACSY
	ATOM	112	OG	SER	2	-17.932	-20.796	1.734	1.00	9.82	ACSY

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	ATOM	113	HG	SER	2	-17.058	-21.152	1.816	1.00	9.92	ACSY
	ATOM	114	C	SER	2	-17.138	-18.119	2.492	1.00	8.68	ACSY
	ATOM	115	O	SER	2	-16.353	-18.690	1.743	1.00	8.72	ACSY
	ATOM	116	N	ARG	3	-16.966	-16.884	2.995	1.00	8.32	ACSY
5	ATOM	117	HN	ARG	3	-17.651	-16.480	3.602	1.00	8.52	ACSY
	ATOM	118	CA	ARG	3	-15.762	-16.148	2.637	1.00	7.90	ACSY
	ATOM	119	HA	ARG	3	-14.911	-16.807	2.821	1.00	8.17	ACSY
	ATOM	120	CB	ARG	3	-15.827	-15.760	1.166	1.00	8.52	ACSY
	ATOM	121	HB1	ARG	3	-15.054	-15.025	0.947	1.00	8.76	ACSY
10	ATOM	122	HB2	ARG	3	-15.616	-16.634	0.549	1.00	8.65	ACSY
	ATOM	123	CG	ARG	3	-17.196	-15.193	0.797	1.00	9.04	ACSY
	ATOM	124	HG1	ARG	3	-17.381	-14.282	1.366	1.00	9.17	ACSY
	ATOM	125	HG2	ARG	3	-17.973	-15.903	1.079	1.00	9.09	ACSY
	ATOM	126	CD	ARG	3	-17.293	-14.895	-0.696	1.00	9.72	ACSY
15	ATOM	127	HD1	ARG	3	-18.320	-14.681	-0.993	1.00	9.94	ACSY
	ATOM	128	HD2	ARG	3	-16.924	-15.723	-1.297	1.00	9.81	ACSY
	ATOM	129	NE	ARG	3	-16.493	-13.729	-1.032	1.00	10.34	ACSY
	ATOM	130	HE	ARG	3	-16.896	-12.814	-1.019	1.00	10.40	ACSY
	ATOM	131	CZ	ARG	3	-15.197	-13.899	-1.359	1.00	11.04	ACSY
20	ATOM	132	NH1	ARG	3	-14.447	-12.843	-1.665	1.00	11.79	ACSY
	ATOM	133	HH11	ARG	3	-14.846	-11.927	-1.652	1.00	11.84	ACSY
	ATOM	134	HH12	ARG	3	-13.485	-12.967	-1.907	1.00	12.39	ACSY
	ATOM	135	NH2	ARG	3	-14.663	-15.118	-1.378	1.00	11.17	ACSY
	ATOM	136	HH21	ARG	3	-15.225	-15.913	-1.149	1.00	10.74	ACSY
25	ATOM	137	HH22	ARG	3	-13.701	-15.239	-1.621	1.00	11.80	ACSY
	ATOM	138	C	ARG	3	-15.624	-14.897	3.514	1.00	6.86	ACSY
	ATOM	139	O	ARG	3	-15.148	-13.857	3.076	1.00	6.84	ACSY
	ATOM	140	N	ARG	4	-16.064	-15.073	4.776	1.00	6.28	ACSY
	ATOM	141	HN	ARG	4	-16.437	-15.953	5.067	1.00	6.63	ACSY
30	ATOM	142	CA	ARG	4	-15.985	-13.957	5.703	1.00	5.44	ACSY
	ATOM	143	HA	ARG	4	-16.530	-14.246	6.606	1.00	5.54	ACSY
	ATOM	144	CB	ARG	4	-14.520	-13.668	6.024	1.00	5.41	ACSY
	ATOM	145	HB1	ARG	4	-14.059	-14.556	6.455	1.00	5.79	ACSY
	ATOM	146	HB2	ARG	4	-13.980	-13.448	5.104	1.00	5.72	ACSY
35	ATOM	147	CG	ARG	4	-14.380	-12.495	6.996	1.00	5.07	ACSY
	ATOM	148	HG1	ARG	4	-14.567	-11.560	6.470	1.00	5.15	ACSY
	ATOM	149	HG2	ARG	4	-15.138	-12.575	7.775	1.00	5.27	ACSY
	ATOM	150	CD	ARG	4	-12.993	-12.456	7.637	1.00	5.03	ACSY
	ATOM	151	HD1	ARG	4	-12.207	-12.345	6.888	1.00	5.01	ACSY

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	ATOM	152	HD2	ARG	4	-12.794	-13.352	8.221	1.00	5.05	ACSY
	ATOM	153	NE	ARG	4	-12.894	-11.325	8.543	1.00	5.65	ACSY
	ATOM	154	HE	ARG	4	-13.490	-10.530	8.432	1.00	6.04	ACSY
	ATOM	155	CZ	ARG	4	-11.987	-11.367	9.537	1.00	6.06	ACSY
5	ATOM	156	NH1	ARG	4	-11.882	-10.345	10.382	1.00	6.93	ACSY
	ATOM	157	HH11	ARG	4	-12.476	-9.547	10.277	1.00	7.26	ACSY
	ATOM	158	HH12	ARG	4	-11.209	-10.374	11.121	1.00	7.42	ACSY
	ATOM	159	NH2	ARG	4	-11.195	-12.428	9.677	1.00	5.95	ACSY
	ATOM	160	HH21	ARG	4	-11.273	-13.197	9.043	1.00	5.52	ACSY
10	ATOM	161	HH22	ARG	4	-10.523	-12.456	10.417	1.00	6.51	ACSY
	ATOM	162	C	ARG	4	-16.656	-12.730	5.086	1.00	5.05	ACSY
	ATOM	163	O	ARG	4	-16.958	-12.683	3.900	1.00	5.27	ACSY
	ATOM	164	N	ALA	5	-16.875	-11.746	5.977	1.00	4.86	ACSY
	ATOM	165	HN	ALA	5	-16.613	-11.857	6.934	1.00	5.05	ACSY
15	ATOM	166	CA	ALA	5	-17.506	-10.521	5.519	1.00	4.79	ACSY
	ATOM	167	HA	ALA	5	-18.191	-10.793	4.713	1.00	5.29	ACSY
	ATOM	168	CB	ALA	5	-18.263	-9.875	6.678	1.00	5.32	ACSY
	ATOM	169	HB1	ALA	5	-18.761	-8.960	6.355	1.00	5.57	ACSY
	ATOM	170	HB2	ALA	5	-19.023	-10.550	7.071	1.00	5.59	ACSY
20	ATOM	171	HB3	ALA	5	-17.585	-9.619	7.492	1.00	5.61	ACSY
	ATOM	172	C	ALA	5	-16.439	-9.573	4.968	1.00	3.98	ACSY
	ATOM	173	O	ALA	5	-16.103	-9.594	3.790	1.00	4.06	ACSY
	ATOM	174	N	SER	6	-15.935	-8.743	5.899	1.00	3.66	ACSY
	ATOM	175	HN	SER	6	-16.257	-8.782	6.844	1.00	4.09	ACSY
25	ATOM	176	CA	SER	6	-14.912	-7.790	5.500	1.00	3.17	ACSY
	ATOM	177	HA	SER	6	-15.261	-7.303	4.586	1.00	3.31	ACSY
	ATOM	178	CB	SER	6	-14.706	-6.768	6.615	1.00	3.61	ACSY
	ATOM	179	HB1	SER	6	-13.988	-6.005	6.314	1.00	3.90	ACSY
	ATOM	180	HB2	SER	6	-15.643	-6.268	6.863	1.00	3.95	ACSY
30	ATOM	181	OG	SER	6	-14.221	-7.391	7.777	1.00	4.03	ACSY
	ATOM	182	HG	SER	6	-13.626	-6.778	8.187	1.00	4.34	ACSY
	ATOM	183	C	SER	6	-13.610	-8.534	5.207	1.00	2.86	ACSY
	ATOM	184	O	SER	6	-13.354	-9.618	5.717	1.00	3.29	ACSY
	ATOM	185	N	VAL	7	-12.810	-7.873	4.350	1.00	2.60	ACSY
35	ATOM	186	HN	VAL	7	-13.088	-6.990	3.973	1.00	2.58	ACSY
	ATOM	187	CA	VAL	7	-11.537	-8.470	3.983	1.00	2.97	ACSY
	ATOM	188	HA	VAL	7	-11.748	-9.286	3.286	1.00	3.40	ACSY
	ATOM	189	CB	VAL	7	-10.652	-7.413	3.328	1.00	3.63	ACSY
	ATOM	190	HB	VAL	7	-11.128	-7.090	2.401	1.00	3.85	ACSY

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	ATOM	191	CG1	VAL	7	-10.501	-6.199	4.243	1.00	3.87	ACSY
	ATOM	192	HG11	VAL	7	-10.042	-6.480	5.191	1.00	4.23	ACSY
	ATOM	193	HG12	VAL	7	-11.471	-5.751	4.459	1.00	4.18	ACSY
	ATOM	194	HG13	VAL	7	-9.874	-5.437	3.779	1.00	3.99	ACSY
5	ATOM	195	CG2	VAL	7	-9.279	-8.000	2.997	1.00	4.53	ACSY
	ATOM	196	HG21	VAL	7	-8.800	-8.397	3.892	1.00	5.05	ACSY
	ATOM	197	HG22	VAL	7	-9.366	-8.811	2.273	1.00	4.84	ACSY
	ATOM	198	HG23	VAL	7	-8.623	-7.239	2.573	1.00	4.79	ACSY
	ATOM	199	C	VAL	7	-10.858	-9.039	5.229	1.00	2.97	ACSY
10	ATOM	200	O	VAL	7	-10.543	-8.329	6.176	1.00	3.56	ACSY
	ATOM	201	N	GLY	8	-10.659	-10.367	5.157	1.00	2.78	ACSY
	ATOM	202	HN	GLY	8	-10.943	-10.882	4.349	1.00	2.72	ACSY
	ATOM	203	CA	GLY	8	-10.020	-11.034	6.274	1.00	3.21	ACSY
	ATOM	204	HA1	GLY	8	-10.329	-12.080	6.256	1.00	3.70	ACSY
15	ATOM	205	HA2	GLY	8	-10.383	-10.568	7.190	1.00	3.50	ACSY
	ATOM	206	C	GLY	8	-8.498	-10.921	6.180	1.00	3.25	ACSY
	ATOM	207	O	GLY	8	-7.769	-11.903	6.258	1.00	3.70	ACSY
	ATOM	208	N	SER	9	-8.075	-9.656	6.006	1.00	3.25	ACSY
	ATOM	209	HN	SER	9	-8.730	-8.902	5.954	1.00	3.31	ACSY
20	ATOM	210	CA	SER	9	-6.649	-9.410	5.899	1.00	3.63	ACSY
	ATOM	211	HA	SER	9	-6.521	-8.404	5.489	1.00	3.96	ACSY
	ATOM	212	CB	SER	9	-6.011	-9.518	7.281	1.00	4.53	ACSY
	ATOM	213	HB1	SER	9	-6.479	-8.823	7.977	1.00	4.87	ACSY
	ATOM	214	HB2	SER	9	-4.947	-9.286	7.238	1.00	4.92	ACSY
25	ATOM	215	OG	SER	9	-6.157	-10.817	7.794	1.00	5.09	ACSY
	ATOM	216	HG	SER	9	-6.454	-10.725	8.689	1.00	5.60	ACSY
	ATOM	217	C	SER	9	-6.030	-10.425	4.941	1.00	3.30	ACSY
	ATOM	218	O	SER	9	-5.335	-11.352	5.339	1.00	3.79	ACSY
	ATOM	219	N	HIS	10	-6.330	-10.180	3.653	1.00	3.01	ACSY
30	ATOM	220	HN	HIS	10	-6.900	-9.398	3.403	1.00	3.18	ACSY
	ATOM	221	CA	HIS	10	-5.808	-11.075	2.636	1.00	3.08	ACSY
	ATOM	222	HA	HIS	10	-6.017	-12.098	2.963	1.00	3.58	ACSY
	ATOM	223	CB	HIS	10	-6.488	-10.781	1.301	1.00	3.80	ACSY
	ATOM	224	HB1	HIS	10	-6.423	-9.719	1.065	1.00	4.15	ACSY
35	ATOM	225	HB2	HIS	10	-5.999	-11.329	0.496	1.00	4.03	ACSY
	ATOM	226	CG	HIS	10	-7.941	-11.190	1.371	1.00	4.47	ACSY
	ATOM	227	CD2	HIS	10	-8.741	-11.366	2.516	1.00	5.19	ACSY
	ATOM	228	HD2	HIS	10	-8.433	-11.236	3.542	1.00	5.38	ACSY
	ATOM	229	ND1	HIS	10	-8.700	-11.451	0.285	1.00	4.99	ACSY

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	ATOM	230	HD1	HIS	10	-8.417	-11.412	-0.653	1.00	5.01	ACSY
	ATOM	231	CE1	HIS	10	-9.921	-11.776	0.743	1.00	5.85	ACSY
	ATOM	232	HE1	HIS	10	-10.757	-12.039	0.111	1.00	6.59	ACSY
	ATOM	233	NE2	HIS	10	-9.970	-11.732	2.086	1.00	5.97	ACSY
5	ATOM	234	C	HIS	10	-4.297	-10.887	2.519	1.00	2.47	ACSY
	ATOM	235	O	HIS	10	-3.798	-10.190	1.644	1.00	2.49	ACSY
	ATOM	236	N	GLU	11	-3.608	-11.560	3.458	1.00	2.40	ACSY
	ATOM	237	HN	GLU	11	-4.074	-12.116	4.140	1.00	2.73	ACSY
	ATOM	238	CA	GLU	11	-2.170	-11.475	3.463	1.00	2.34	ACSY
10	ATOM	239	HA	GLU	11	-1.900	-10.433	3.639	1.00	2.44	ACSY
	ATOM	240	CB	GLU	11	-1.652	-12.378	4.570	1.00	2.96	ACSY
	ATOM	241	HB1	GLU	11	-2.480	-12.680	5.208	1.00	3.18	ACSY
	ATOM	242	HB2	GLU	11	-1.249	-13.287	4.136	1.00	3.13	ACSY
	ATOM	243	CG	GLU	11	-0.588	-11.678	5.406	1.00	3.54	ACSY
15	ATOM	244	HG1	GLU	11	0.236	-11.351	4.775	1.00	3.67	ACSY
	ATOM	245	HG2	GLU	11	-1.007	-10.797	5.892	1.00	3.72	ACSY
	ATOM	246	CD	GLU	11	-0.052	-12.631	6.476	1.00	4.24	ACSY
	ATOM	247	OE1	GLU	11	-0.462	-12.509	7.629	1.00	4.62	ACSY
	ATOM	248	OE2	GLU	11	0.770	-13.484	6.144	1.00	4.74	ACSY
20	ATOM	249	C	GLU	11	-1.631	-11.926	2.112	1.00	2.16	ACSY
	ATOM	250	O	GLU	11	-0.885	-11.225	1.439	1.00	2.18	ACSY
	ATOM	251	N	LYS	12	-2.068	-13.151	1.778	1.00	2.44	ACSY
	ATOM	252	HN	LYS	12	-2.665	-13.656	2.403	1.00	2.76	ACSY
	ATOM	253	CA	LYS	12	-1.651	-13.737	0.511	1.00	2.66	ACSY
25	ATOM	254	HA	LYS	12	-0.660	-14.174	0.665	1.00	3.12	ACSY
	ATOM	255	CB	LYS	12	-2.657	-14.809	0.099	1.00	3.44	ACSY
	ATOM	256	HB1	LYS	12	-3.618	-14.343	-0.118	1.00	3.47	ACSY
	ATOM	257	HB2	LYS	12	-2.325	-15.289	-0.822	1.00	3.71	ACSY
	ATOM	258	CG	LYS	12	-2.836	-15.863	1.192	1.00	4.37	ACSY
30	ATOM	259	HG1	LYS	12	-1.928	-16.461	1.277	1.00	4.60	ACSY
	ATOM	260	HG2	LYS	12	-2.979	-15.371	2.154	1.00	4.75	ACSY
	ATOM	261	CD	LYS	12	-4.028	-16.776	0.902	1.00	5.03	ACSY
	ATOM	262	HD1	LYS	12	-4.122	-17.517	1.695	1.00	5.34	ACSY
	ATOM	263	HD2	LYS	12	-4.947	-16.189	0.909	1.00	4.95	ACSY
35	ATOM	264	CE	LYS	12	-3.880	-17.482	-0.446	1.00	5.94	ACSY
	ATOM	265	HE1	LYS	12	-3.757	-16.755	-1.249	1.00	6.28	ACSY
	ATOM	266	HE2	LYS	12	-3.003	-18.129	-0.447	1.00	6.22	ACSY
	ATOM	267	NZ	LYS	12	-5.039	-18.306	-0.770	1.00	6.49	ACSY
	ATOM	268	HZ1	LYS	12	-4.893	-18.761	-1.694	1.00	6.68	ACSY

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	ATOM	269	HZ2	LYS	12	-5.161	-19.036	-0.039	1.00	6.91	ACSY
	ATOM	270	HZ3	LYS	12	-5.889	-17.708	-0.808	1.00	6.61	ACSY
	ATOM	271	C	LYS	12	-1.559	-12.653	-0.563	1.00	2.13	ACSY
	ATOM	272	O	LYS	12	-2.557	-12.154	-1.057	1.00	2.63	ACSY
5	ATOM	273	N	MET	13	-0.285	-12.340	-0.873	1.00	1.83	ACSY
	ATOM	274	HN	MET	13	0.468	-12.807	-0.411	1.00	2.22	ACSY
	ATOM	275	CA	MET	13	-0.002	-11.321	-1.882	1.00	1.83	ACSY
	ATOM	276	HA	MET	13	0.048	-11.826	-2.848	1.00	2.37	ACSY
	ATOM	277	CB	MET	13	-1.083	-10.233	-1.879	1.00	2.34	ACSY
10	ATOM	278	HB1	MET	13	-1.621	-10.253	-0.932	1.00	2.33	ACSY
	ATOM	279	HB2	MET	13	-0.604	-9.256	-1.940	1.00	2.63	ACSY
	ATOM	280	CG	MET	13	-2.079	-10.379	-3.044	1.00	3.26	ACSY
	ATOM	281	HG1	MET	13	-2.825	-11.136	-2.820	1.00	3.64	ACSY
	ATOM	282	HG2	MET	13	-2.613	-9.441	-3.194	1.00	3.50	ACSY
15	ATOM	283	SD	MET	13	-1.252	-10.822	-4.580	1.00	4.25	ACSY
	ATOM	284	CE	MET	13	-1.731	-12.557	-4.631	1.00	4.96	ACSY
	ATOM	285	HE1	MET	13	-0.919	-13.162	-5.035	1.00	5.13	ACSY
	ATOM	286	HE2	MET	13	-2.610	-12.689	-5.261	1.00	5.43	ACSY
	ATOM	287	HE3	MET	13	-1.964	-12.914	-3.628	1.00	5.19	ACSY
20	ATOM	288	C	MET	13	1.366	-10.713	-1.555	1.00	1.57	ACSY
	ATOM	289	O	MET	13	1.843	-10.785	-0.430	1.00	1.67	ACSY
	ATOM	290	N	PRO	14	1.978	-10.111	-2.602	1.00	1.40	ACSY
	ATOM	291	CD	PRO	14	1.417	-10.040	-3.937	1.00	1.46	ACSY
	ATOM	292	HD1	PRO	14	0.542	-9.391	-3.941	1.00	1.49	ACSY
25	ATOM	293	HD2	PRO	14	1.120	-11.027	-4.274	1.00	1.69	ACSY
	ATOM	294	CA	PRO	14	3.279	-9.483	-2.491	1.00	1.35	ACSY
	ATOM	295	HA	PRO	14	3.942	-10.074	-1.865	1.00	1.54	ACSY
	ATOM	296	CB	PRO	14	3.782	-9.370	-3.928	1.00	1.38	ACSY
	ATOM	297	HB1	PRO	14	4.298	-8.423	-4.086	1.00	1.44	ACSY
30	ATOM	298	HB2	PRO	14	4.482	-10.175	-4.155	1.00	1.60	ACSY
	ATOM	299	CG	PRO	14	2.535	-9.470	-4.817	1.00	1.40	ACSY
	ATOM	300	HG1	PRO	14	2.258	-8.490	-5.202	1.00	1.44	ACSY
	ATOM	301	HG2	PRO	14	2.720	-10.108	-5.663	1.00	1.60	ACSY
	ATOM	302	C	PRO	14	3.148	-8.078	-1.937	1.00	1.26	ACSY
35	ATOM	303	O	PRO	14	3.558	-7.757	-0.831	1.00	1.41	ACSY
	ATOM	304	N	TRP	15	2.515	-7.281	-2.805	1.00	1.17	ACSY
	ATOM	305	HN	TRP	15	2.196	-7.649	-3.689	1.00	1.17	ACSY
	ATOM	306	CA	TRP	15	2.298	-5.880	-2.458	1.00	1.26	ACSY
	ATOM	307	HA	TRP	15	3.264	-5.479	-2.133	1.00	1.41	ACSY

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	ATOM	308	CB	TRP	15	1.788	-5.095	-3.682	1.00	1.44	ACSY
	ATOM	309	HB1	TRP	15	1.338	-4.163	-3.358	1.00	1.41	ACSY
	ATOM	310	HB2	TRP	15	2.617	-4.840	-4.338	1.00	1.60	ACSY
	ATOM	311	CG	TRP	15	0.749	-5.891	-4.464	1.00	1.71	ACSY
5	ATOM	312	CD2	TRP	15	0.397	-5.729	-5.840	1.00	2.23	ACSY
	ATOM	313	CE2	TRP	15	-0.624	-6.690	-6.124	1.00	2.46	ACSY
	ATOM	314	CE3	TRP	15	0.850	-4.872	-6.832	1.00	2.89	ACSY
	ATOM	315	HE3	TRP	15	1.621	-4.148	-6.614	1.00	2.88	ACSY
	ATOM	316	CD1	TRP	15	-0.041	-6.920	-3.958	1.00	2.00	ACSY
10	ATOM	317	HD1	TRP	15	0.019	-7.304	-2.955	1.00	2.35	ACSY
	ATOM	318	NE1	TRP	15	-0.860	-7.395	-4.942	1.00	2.25	ACSY
	ATOM	319	HE1	TRP	15	-1.511	-8.119	-4.835	1.00	2.53	ACSY
	ATOM	320	CZ2	TRP	15	-1.175	-6.776	-7.396	1.00	3.15	ACSY
	ATOM	321	HZ2	TRP	15	-1.946	-7.503	-7.606	1.00	3.33	ACSY
15	ATOM	322	CZ3	TRP	15	0.294	-4.951	-8.134	1.00	3.75	ACSY
	ATOM	323	HZ3	TRP	15	0.643	-4.288	-8.912	1.00	4.43	ACSY
	ATOM	324	CH2	TRP	15	-0.720	-5.904	-8.416	1.00	3.82	ACSY
	ATOM	325	HH2	TRP	15	-1.143	-5.965	-9.408	1.00	4.49	ACSY
	ATOM	326	C	TRP	15	1.304	-5.744	-1.294	1.00	1.18	ACSY
20	ATOM	327	O	TRP	15	0.867	-4.651	-0.965	1.00	1.21	ACSY
	ATOM	328	N	PHE	16	0.973	-6.903	-0.692	1.00	1.17	ACSY
	ATOM	329	HN	PHE	16	1.327	-7.775	-1.019	1.00	1.22	ACSY
	ATOM	330	CA	PHE	16	0.059	-6.845	0.428	1.00	1.18	ACSY
	ATOM	331	HA	PHE	16	0.044	-5.809	0.779	1.00	1.12	ACSY
25	ATOM	332	CB	PHE	16	-1.326	-7.277	-0.014	1.00	1.33	ACSY
	ATOM	333	HB1	PHE	16	-1.600	-6.763	-0.930	1.00	1.39	ACSY
	ATOM	334	HB2	PHE	16	-1.339	-8.347	-0.224	1.00	1.50	ACSY
	ATOM	335	CG	PHE	16	-2.330	-6.975	1.064	1.00	1.35	ACSY
	ATOM	336	CD1	PHE	16	-2.511	-7.882	2.139	1.00	1.69	ACSY
30	ATOM	337	HD1	PHE	16	-1.952	-8.802	2.163	1.00	2.35	ACSY
	ATOM	338	CD2	PHE	16	-3.078	-5.770	1.044	1.00	1.93	ACSY
	ATOM	339	HD2	PHE	16	-2.949	-5.068	0.233	1.00	2.63	ACSY
	ATOM	340	CE1	PHE	16	-3.421	-7.589	3.179	1.00	1.71	ACSY
	ATOM	341	HE1	PHE	16	-3.542	-8.282	4.000	1.00	2.35	ACSY
35	ATOM	342	CE2	PHE	16	-3.989	-5.481	2.087	1.00	1.99	ACSY
	ATOM	343	HE2	PHE	16	-4.552	-4.562	2.072	1.00	2.73	ACSY
	ATOM	344	CZ	PHE	16	-4.160	-6.390	3.152	1.00	1.47	ACSY
	ATOM	345	HZ	PHE	16	-4.856	-6.167	3.947	1.00	1.53	ACSY
	ATOM	346	C	PHE	16	0.548	-7.740	1.558	1.00	1.37	ACSY

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	ATOM	347	O	PHE	16	0.132	-8.881	1.707	1.00	1.98	ACSY
	ATOM	348	N	HIS	17	1.463	-7.147	2.337	1.00	1.18	ACSY
	ATOM	349	HN	HIS	17	1.791	-6.227	2.135	1.00	1.30	ACSY
	ATOM	350	CA	HIS	17	1.977	-7.883	3.467	1.00	1.33	ACSY
5	ATOM	351	HA	HIS	17	1.547	-8.888	3.425	1.00	1.64	ACSY
	ATOM	352	CB	HIS	17	3.491	-7.940	3.414	1.00	1.75	ACSY
	ATOM	353	HB1	HIS	17	3.901	-7.013	3.013	1.00	1.78	ACSY
	ATOM	354	HB2	HIS	17	3.887	-8.073	4.414	1.00	2.06	ACSY
	ATOM	355	CG	HIS	17	3.919	-9.100	2.548	1.00	2.50	ACSY
10	ATOM	356	CD2	HIS	17	3.426	-9.460	1.282	1.00	3.04	ACSY
	ATOM	357	HD2	HIS	17	2.655	-8.949	0.723	1.00	2.88	ACSY
	ATOM	358	ND1	HIS	17	4.869	-9.993	2.899	1.00	3.11	ACSY
	ATOM	359	HD1	HIS	17	5.391	-10.000	3.728	1.00	3.08	ACSY
	ATOM	360	CE1	HIS	17	4.957	-10.872	1.886	1.00	3.95	ACSY
15	ATOM	361	HE1	HIS	17	5.634	-11.713	1.868	1.00	4.63	ACSY
	ATOM	362	NE2	HIS	17	4.096	-10.571	0.897	1.00	3.96	ACSY
	ATOM	363	C	HIS	17	1.514	-7.196	4.746	1.00	1.30	ACSY
	ATOM	364	O	HIS	17	1.908	-6.081	5.067	1.00	1.46	ACSY
	ATOM	365	N	GLY	18	0.651	-7.943	5.443	1.00	1.54	ACSY
20	ATOM	366	HN	GLY	18	0.407	-8.855	5.127	1.00	1.71	ACSY
	ATOM	367	CA	GLY	18	0.114	-7.413	6.682	1.00	1.88	ACSY
	ATOM	368	HA1	GLY	18	-0.900	-7.799	6.792	1.00	2.11	ACSY
	ATOM	369	HA2	GLY	18	0.077	-6.328	6.587	1.00	1.95	ACSY
	ATOM	370	C	GLY	18	0.987	-7.817	7.877	1.00	2.10	ACSY
25	ATOM	371	O	GLY	18	0.506	-8.052	8.979	1.00	2.46	ACSY
	ATOM	372	N	LYS	19	2.297	-7.881	7.575	1.00	1.96	ACSY
	ATOM	373	HN	LYS	19	2.613	-7.677	6.648	1.00	1.76	ACSY
	ATOM	374	CA	LYS	19	3.239	-8.257	8.614	1.00	2.25	ACSY
	ATOM	375	HA	LYS	19	2.679	-8.337	9.549	1.00	2.47	ACSY
30	ATOM	376	CB	LYS	19	3.882	-9.592	8.246	1.00	2.42	ACSY
	ATOM	377	HB1	LYS	19	3.105	-10.332	8.058	1.00	2.52	ACSY
	ATOM	378	HB2	LYS	19	4.443	-9.483	7.318	1.00	2.47	ACSY
	ATOM	379	CG	LYS	19	4.813	-10.095	9.350	1.00	2.83	ACSY
	ATOM	380	HG1	LYS	19	5.543	-9.323	9.593	1.00	3.35	ACSY
35	ATOM	381	HG2	LYS	19	4.238	-10.281	10.257	1.00	3.28	ACSY
	ATOM	382	CD	LYS	19	5.538	-11.373	8.929	1.00	2.77	ACSY
	ATOM	383	HD1	LYS	19	4.808	-12.149	8.700	1.00	2.91	ACSY
	ATOM	384	HD2	LYS	19	6.099	-11.190	8.012	1.00	3.00	ACSY
	ATOM	385	CE	LYS	19	6.487	-11.868	10.020	1.00	3.23	ACSY

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	ATOM	386	HE1	LYS	19	7.245	-11.116	10.239	1.00	3.73	ACSY
	ATOM	387	HE2	LYS	19	5.940	-12.067	10.942	1.00	3.52	ACSY
	ATOM	388	NZ	LYS	19	7.176	-13.095	9.640	1.00	3.46	ACSY
	ATOM	389	HZ1	LYS	19	7.720	-12.932	8.769	1.00	3.67	ACSY
5	ATOM	390	HZ2	LYS	19	6.478	-13.849	9.476	1.00	3.66	ACSY
	ATOM	391	HZ3	LYS	19	7.822	-13.381	10.403	1.00	3.79	ACSY
	ATOM	392	C	LYS	19	4.306	-7.172	8.755	1.00	2.17	ACSY
	ATOM	393	O	LYS	19	4.560	-6.650	9.834	1.00	2.83	ACSY
	ATOM	394	N	ILE	20	4.908	-6.874	7.589	1.00	1.56	ACSY
10	ATOM	395	HN	ILE	20	4.644	-7.343	6.747	1.00	1.50	ACSY
	ATOM	396	CA	ILE	20	5.949	-5.857	7.578	1.00	1.44	ACSY
	ATOM	397	HA	ILE	20	6.849	-6.312	7.999	1.00	1.51	ACSY
	ATOM	398	CB	ILE	20	6.204	-5.391	6.146	1.00	1.24	ACSY
	ATOM	399	HB	ILE	20	6.595	-4.374	6.180	1.00	1.31	ACSY
15	ATOM	400	CG2	ILE	20	7.246	-6.285	5.477	1.00	1.23	ACSY
	ATOM	401	HG21	ILE	20	8.154	-6.339	6.079	1.00	1.53	ACSY
	ATOM	402	HG22	ILE	20	6.865	-7.299	5.352	1.00	1.60	ACSY
	ATOM	403	HG23	ILE	20	7.516	-5.901	4.495	1.00	1.66	ACSY
	ATOM	404	CG1	ILE	20	4.901	-5.391	5.341	1.00	1.26	ACSY
20	ATOM	405	HG11	ILE	20	4.514	-6.407	5.274	1.00	1.41	ACSY
	ATOM	406	HG12	ILE	20	4.148	-4.803	5.865	1.00	1.71	ACSY
	ATOM	407	CD1	ILE	20	5.106	-4.826	3.935	1.00	1.07	ACSY
	ATOM	408	HD11	ILE	20	5.308	-3.756	3.974	1.00	1.34	ACSY
	ATOM	409	HD12	ILE	20	5.947	-5.310	3.439	1.00	1.53	ACSY
25	ATOM	410	HD13	ILE	20	4.219	-4.979	3.321	1.00	1.29	ACSY
	ATOM	411	C	ILE	20	5.535	-4.680	8.456	1.00	1.49	ACSY
	ATOM	412	O	ILE	20	4.379	-4.521	8.830	1.00	1.58	ACSY
	ATOM	413	N	SER	21	6.567	-3.873	8.754	1.00	1.47	ACSY
	ATOM	414	HN	SER	21	7.483	-4.069	8.405	1.00	1.41	ACSY
30	ATOM	415	CA	SER	21	6.325	-2.711	9.590	1.00	1.57	ACSY
	ATOM	416	HA	SER	21	5.490	-2.945	10.233	1.00	1.67	ACSY
	ATOM	417	CB	SER	21	7.572	-2.415	10.418	1.00	1.63	ACSY
	ATOM	418	HB1	SER	21	7.829	-3.265	11.051	1.00	1.95	ACSY
	ATOM	419	HB2	SER	21	8.425	-2.205	9.774	1.00	1.66	ACSY
35	ATOM	420	OG	SER	21	7.364	-1.299	11.246	1.00	2.23	ACSY
	ATOM	421	HG	SER	21	8.215	-0.910	11.397	1.00	2.35	ACSY
	ATOM	422	C	SER	21	5.969	-1.511	8.719	1.00	1.51	ACSY
	ATOM	423	O	SER	21	4.830	-1.066	8.637	1.00	1.58	ACSY
	ATOM	424	N	ARG	22	7.041	-1.037	8.086	1.00	1.44	ACSY

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	ATOM	425	HN	ARG	22	7.928	-1.480	8.213	1.00	1.46	ACSY
	ATOM	426	CA	ARG	22	6.929	0.118	7.212	1.00	1.40	ACSY
	ATOM	427	HA	ARG	22	6.228	-0.136	6.413	1.00	1.34	ACSY
	ATOM	428	CB	ARG	22	6.454	1.329	8.012	1.00	1.57	ACSY
5	ATOM	429	HB1	ARG	22	5.552	1.070	8.568	1.00	1.98	ACSY
	ATOM	430	HB2	ARG	22	7.211	1.597	8.747	1.00	1.53	ACSY
	ATOM	431	CG	ARG	22	6.172	2.525	7.105	1.00	1.89	ACSY
	ATOM	432	HG1	ARG	22	6.960	2.609	6.357	1.00	2.11	ACSY
	ATOM	433	HG2	ARG	22	5.241	2.360	6.562	1.00	2.13	ACSY
10	ATOM	434	CD	ARG	22	6.079	3.830	7.898	1.00	2.36	ACSY
	ATOM	435	HD1	ARG	22	5.505	3.705	8.815	1.00	2.77	ACSY
	ATOM	436	HD2	ARG	22	5.619	4.623	7.309	1.00	2.76	ACSY
	ATOM	437	NE	ARG	22	7.408	4.298	8.262	1.00	2.61	ACSY
	ATOM	438	HE	ARG	22	7.953	4.826	7.612	1.00	2.68	ACSY
15	ATOM	439	CZ	ARG	22	7.899	4.012	9.487	1.00	3.36	ACSY
	ATOM	440	NH1	ARG	22	9.114	4.436	9.823	1.00	3.96	ACSY
	ATOM	441	HH11	ARG	22	9.658	4.964	9.171	1.00	3.94	ACSY
	ATOM	442	HH12	ARG	22	9.484	4.227	10.729	1.00	4.64	ACSY
	ATOM	443	NH2	ARG	22	7.180	3.311	10.359	1.00	3.92	ACSY
20	ATOM	444	HH21	ARG	22	6.266	2.990	10.110	1.00	3.79	ACSY
	ATOM	445	HH22	ARG	22	7.553	3.104	11.264	1.00	4.68	ACSY
	ATOM	446	C	ARG	22	8.316	0.372	6.623	1.00	1.31	ACSY
	ATOM	447	O	ARG	22	8.490	0.687	5.452	1.00	1.22	ACSY
	ATOM	448	N	GLU	23	9.283	0.196	7.543	1.00	1.36	ACSY
25	ATOM	449	HN	GLU	23	9.048	-0.060	8.479	1.00	1.46	ACSY
	ATOM	450	CA	GLU	23	10.663	0.345	7.179	1.00	1.31	ACSY
	ATOM	451	HA	GLU	23	10.745	1.195	6.502	1.00	1.29	ACSY
	ATOM	452	CB	GLU	23	11.448	0.560	8.468	1.00	1.43	ACSY
	ATOM	453	HB1	GLU	23	12.274	1.226	8.280	1.00	1.45	ACSY
30	ATOM	454	HB2	GLU	23	10.800	1.042	9.187	1.00	1.54	ACSY
	ATOM	455	CG	GLU	23	11.969	-0.737	9.080	1.00	1.43	ACSY
	ATOM	456	HG1	GLU	23	11.142	-1.361	9.421	1.00	1.45	ACSY
	ATOM	457	HG2	GLU	23	12.530	-1.304	8.349	1.00	1.33	ACSY
	ATOM	458	CD	GLU	23	12.877	-0.422	10.271	1.00	1.56	ACSY
35	ATOM	459	OE1	GLU	23	14.004	-0.913	10.294	1.00	1.99	ACSY
	ATOM	460	OE2	GLU	23	12.446	0.310	11.160	1.00	1.89	ACSY
	ATOM	461	C	GLU	23	11.103	-0.934	6.485	1.00	1.18	ACSY
	ATOM	462	O	GLU	23	11.758	-0.940	5.451	1.00	1.08	ACSY
	ATOM	463	N	GLU	24	10.675	-2.009	7.156	1.00	1.21	ACSY

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	ATOM	464	HN	GLU	24	10.161	-1.880	8.019	1.00	1.31	ACSY
	ATOM	465	CA	GLU	24	10.984	-3.332	6.657	1.00	1.15	ACSY
	ATOM	466	HA	GLU	24	12.057	-3.491	6.800	1.00	1.16	ACSY
	ATOM	467	CB	GLU	24	10.176	-4.351	7.450	1.00	1.26	ACSY
5	ATOM	468	HB1	GLU	24	9.127	-4.292	7.161	1.00	1.25	ACSY
	ATOM	469	HB2	GLU	24	10.513	-5.354	7.207	1.00	1.24	ACSY
	ATOM	470	CG	GLU	24	10.308	-4.113	8.954	1.00	1.44	ACSY
	ATOM	471	HG1	GLU	24	10.108	-3.069	9.197	1.00	1.79	ACSY
	ATOM	472	HG2	GLU	24	9.595	-4.725	9.506	1.00	1.59	ACSY
10	ATOM	473	CD	GLU	24	11.725	-4.465	9.413	1.00	1.80	ACSY
	ATOM	474	OE1	GLU	24	11.986	-4.399	10.613	1.00	2.37	ACSY
	ATOM	475	OE2	GLU	24	12.549	-4.800	8.564	1.00	2.30	ACSY
	ATOM	476	C	GLU	24	10.657	-3.423	5.163	1.00	0.99	ACSY
	ATOM	477	O	GLU	24	11.391	-4.009	4.378	1.00	0.94	ACSY
15	ATOM	478	N	SER	25	9.516	-2.794	4.828	1.00	0.96	ACSY
	ATOM	479	HN	SER	25	8.975	-2.319	5.521	1.00	1.04	ACSY
	ATOM	480	CA	SER	25	9.086	-2.818	3.435	1.00	0.84	ACSY
	ATOM	481	HA	SER	25	9.332	-3.806	3.039	1.00	0.83	ACSY
	ATOM	482	CB	SER	25	7.581	-2.585	3.382	1.00	0.86	ACSY
20	ATOM	483	HB1	SER	25	7.144	-3.083	2.519	1.00	1.16	ACSY
	ATOM	484	HB2	SER	25	7.098	-2.976	4.277	1.00	1.37	ACSY
	ATOM	485	OG	SER	25	7.292	-1.213	3.290	1.00	1.53	ACSY
	ATOM	486	HG	SER	25	6.367	-1.143	3.093	1.00	1.79	ACSY
	ATOM	487	C	SER	25	9.826	-1.755	2.607	1.00	0.75	ACSY
25	ATOM	488	O	SER	25	9.979	-1.879	1.398	1.00	0.67	ACSY
	ATOM	489	N	GLU	26	10.269	-0.710	3.331	1.00	0.83	ACSY
	ATOM	490	HN	GLU	26	10.126	-0.668	4.312	1.00	0.92	ACSY
	ATOM	491	CA	GLU	26	10.973	0.359	2.667	1.00	0.81	ACSY
	ATOM	492	HA	GLU	26	10.449	0.553	1.728	1.00	0.73	ACSY
30	ATOM	493	CB	GLU	26	10.916	1.574	3.588	1.00	0.92	ACSY
	ATOM	494	HB1	GLU	26	10.192	2.279	3.205	1.00	0.91	ACSY
	ATOM	495	HB2	GLU	26	10.555	1.265	4.566	1.00	0.99	ACSY
	ATOM	496	CG	GLU	26	12.275	2.244	3.747	1.00	0.99	ACSY
	ATOM	497	HG1	GLU	26	13.013	1.509	4.042	1.00	1.02	ACSY
35	ATOM	498	HG2	GLU	26	12.602	2.689	2.808	1.00	0.96	ACSY
	ATOM	499	CD	GLU	26	12.200	3.331	4.823	1.00	1.11	ACSY
	ATOM	500	OE1	GLU	26	13.249	3.748	5.310	1.00	1.46	ACSY
	ATOM	501	OE2	GLU	26	11.092	3.745	5.163	1.00	1.59	ACSY
	ATOM	502	C	GLU	26	12.418	-0.061	2.350	1.00	0.81	ACSY

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	ATOM	503	O	GLU	26	13.065	0.487	1.465	1.00	0.80	ACSY
	ATOM	504	N	GLN	27	12.875	-1.065	3.123	1.00	0.86	ACSY
	ATOM	505	HN	GLN	27	12.277	-1.507	3.790	1.00	0.90	ACSY
	ATOM	506	CA	GLN	27	14.219	-1.566	2.882	1.00	0.87	ACSY
5	ATOM	507	HA	GLN	27	14.835	-0.723	2.559	1.00	0.91	ACSY
	ATOM	508	CB	GLN	27	14.790	-2.213	4.143	1.00	0.96	ACSY
	ATOM	509	HB1	GLN	27	15.731	-2.709	3.904	1.00	0.98	ACSY
	ATOM	510	HB2	GLN	27	15.021	-1.440	4.876	1.00	1.16	ACSY
	ATOM	511	CG	GLN	27	13.821	-3.221	4.753	1.00	1.16	ACSY
10	ATOM	512	HG1	GLN	27	12.932	-2.717	5.129	1.00	1.40	ACSY
	ATOM	513	HG2	GLN	27	13.503	-3.949	4.006	1.00	1.25	ACSY
	ATOM	514	CD	GLN	27	14.498	-3.959	5.910	1.00	1.50	ACSY
	ATOM	515	OE1	GLN	27	14.807	-5.142	5.831	1.00	1.87	ACSY
	ATOM	516	NE2	GLN	27	14.704	-3.176	6.983	1.00	2.20	ACSY
15	ATOM	517	HE21	GLN	27	14.425	-2.215	6.976	1.00	2.69	ACSY
	ATOM	518	HE22	GLN	27	15.141	-3.541	7.806	1.00	2.54	ACSY
	ATOM	519	C	GLN	27	14.113	-2.574	1.741	1.00	0.78	ACSY
	ATOM	520	O	GLN	27	15.035	-2.796	0.970	1.00	0.79	ACSY
	ATOM	521	N	ILE	28	12.907	-3.163	1.690	1.00	0.73	ACSY
20	ATOM	522	HN	ILE	28	12.196	-2.957	2.367	1.00	0.75	ACSY
	ATOM	523	CA	ILE	28	12.636	-4.086	0.648	1.00	0.69	ACSY
	ATOM	524	HA	ILE	28	13.465	-4.779	0.605	1.00	0.73	ACSY
	ATOM	525	CB	ILE	28	11.323	-4.742	0.999	1.00	0.72	ACSY
	ATOM	526	HB	ILE	28	10.679	-3.974	1.446	1.00	0.74	ACSY
25	ATOM	527	CG2	ILE	28	10.654	-5.289	-0.242	1.00	0.76	ACSY
	ATOM	528	HG21	ILE	28	9.998	-4.544	-0.686	1.00	1.25	ACSY
	ATOM	529	HG22	ILE	28	11.397	-5.577	-0.983	1.00	1.29	ACSY
	ATOM	530	HG23	ILE	28	10.060	-6.167	0.002	1.00	1.25	ACSY
	ATOM	531	CG1	ILE	28	11.527	-5.847	2.019	1.00	0.80	ACSY
30	ATOM	532	HG11	ILE	28	11.891	-6.741	1.517	1.00	0.84	ACSY
	ATOM	533	HG12	ILE	28	12.292	-5.547	2.732	1.00	0.83	ACSY
	ATOM	534	CD1	ILE	28	10.227	-6.157	2.754	1.00	0.89	ACSY
	ATOM	535	HD11	ILE	28	9.367	-6.002	2.101	1.00	1.37	ACSY
	ATOM	536	HD12	ILE	28	10.211	-7.189	3.096	1.00	1.38	ACSY
35	ATOM	537	HD13	ILE	28	10.107	-5.513	3.623	1.00	1.36	ACSY
	ATOM	538	C	ILE	28	12.543	-3.320	-0.664	1.00	0.63	ACSY
	ATOM	539	O	ILE	28	12.982	-3.763	-1.718	1.00	0.66	ACSY
	ATOM	540	N	VAL	29	11.918	-2.146	-0.520	1.00	0.58	ACSY
	ATOM	541	HN	VAL	29	11.536	-1.878	0.370	1.00	0.60	ACSY

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	ATOM	542	CA	VAL	29	11.809	-1.280	-1.670	1.00	0.57	ACSY
	ATOM	543	HA	VAL	29	11.361	-1.861	-2.473	1.00	0.58	ACSY
	ATOM	544	CB	VAL	29	10.981	-0.052	-1.273	1.00	0.55	ACSY
	ATOM	545	HB	VAL	29	11.060	0.060	-0.190	1.00	0.57	ACSY
5	ATOM	546	CG1	VAL	29	11.526	1.224	-1.915	1.00	0.66	ACSY
	ATOM	547	HG11	VAL	29	12.578	1.367	-1.670	1.00	1.22	ACSY
	ATOM	548	HG12	VAL	29	11.435	1.184	-3.001	1.00	1.36	ACSY
	ATOM	549	HG13	VAL	29	10.983	2.094	-1.559	1.00	1.09	ACSY
	ATOM	550	CG2	VAL	29	9.507	-0.234	-1.635	1.00	0.54	ACSY
10	ATOM	551	HG21	VAL	29	9.396	-0.564	-2.668	1.00	1.13	ACSY
	ATOM	552	HG22	VAL	29	9.035	-0.972	-0.988	1.00	1.22	ACSY
	ATOM	553	HG23	VAL	29	8.962	0.704	-1.523	1.00	0.99	ACSY
	ATOM	554	C	VAL	29	13.206	-0.864	-2.106	1.00	0.67	ACSY
	ATOM	555	O	VAL	29	13.469	-0.587	-3.269	1.00	0.73	ACSY
15	ATOM	556	N	LEU	30	14.075	-0.834	-1.093	1.00	0.72	ACSY
	ATOM	557	HN	LEU	30	13.817	-1.124	-0.169	1.00	0.70	ACSY
	ATOM	558	CA	LEU	30	15.421	-0.478	-1.362	1.00	0.84	ACSY
	ATOM	559	HA	LEU	30	15.423	0.538	-1.771	1.00	0.88	ACSY
	ATOM	560	CB	LEU	30	16.145	-0.569	-0.025	1.00	0.90	ACSY
20	ATOM	561	HB1	LEU	30	16.657	0.357	0.175	1.00	1.00	ACSY
	ATOM	562	HB2	LEU	30	15.407	-0.688	0.757	1.00	0.86	ACSY
	ATOM	563	CG	LEU	30	17.108	-1.741	0.048	1.00	0.94	ACSY
	ATOM	564	HG	LEU	30	16.646	-2.586	-0.437	1.00	0.87	ACSY
	ATOM	565	CD1	LEU	30	18.413	-1.409	-0.653	1.00	1.06	ACSY
25	ATOM	566	HD11	LEU	30	19.102	-2.251	-0.606	1.00	1.65	ACSY
	ATOM	567	HD12	LEU	30	18.240	-1.168	-1.699	1.00	1.39	ACSY
	ATOM	568	HD13	LEU	30	18.894	-0.551	-0.182	1.00	1.42	ACSY
	ATOM	569	CD2	LEU	30	17.369	-2.128	1.488	1.00	1.00	ACSY
	ATOM	570	HD21	LEU	30	17.485	-3.209	1.573	1.00	1.36	ACSY
30	ATOM	571	HD22	LEU	30	18.273	-1.656	1.856	1.00	1.42	ACSY
	ATOM	572	HD23	LEU	30	16.538	-1.826	2.122	1.00	1.42	ACSY
	ATOM	573	C	LEU	30	15.967	-1.468	-2.387	1.00	0.86	ACSY
	ATOM	574	O	LEU	30	16.749	-1.139	-3.271	1.00	0.96	ACSY
	ATOM	575	N	ILE	31	15.479	-2.709	-2.188	1.00	0.79	ACSY
35	ATOM	576	HN	ILE	31	14.863	-2.897	-1.411	1.00	0.74	ACSY
	ATOM	577	CA	ILE	31	15.885	-3.766	-3.057	1.00	0.85	ACSY
	ATOM	578	HA	ILE	31	16.980	-3.793	-3.064	1.00	0.91	ACSY
	ATOM	579	CB	ILE	31	15.294	-5.098	-2.599	1.00	0.83	ACSY
	ATOM	580	HB	ILE	31	14.366	-5.267	-3.138	1.00	0.82	ACSY

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	ATOM	581	CG2	ILE	31	16.223	-6.208	-2.978	1.00	0.92	ACSY
	ATOM	582	HG21	ILE	31	16.406	-6.191	-4.052	1.00	1.28	ACSY
	ATOM	583	HG22	ILE	31	17.173	-6.098	-2.465	1.00	1.41	ACSY
	ATOM	584	HG23	ILE	31	15.792	-7.168	-2.718	1.00	1.39	ACSY
5	ATOM	585	CG1	ILE	31	14.972	-5.149	-1.116	1.00	0.78	ACSY
	ATOM	586	HG11	ILE	31	14.811	-4.156	-0.725	1.00	0.75	ACSY
	ATOM	587	HG12	ILE	31	14.028	-5.671	-1.003	1.00	0.77	ACSY
	ATOM	588	CD1	ILE	31	16.065	-5.856	-0.312	1.00	0.85	ACSY
	ATOM	589	HD11	ILE	31	16.217	-6.873	-0.675	1.00	1.28	ACSY
10	ATOM	590	HD12	ILE	31	17.013	-5.324	-0.393	1.00	1.27	ACSY
	ATOM	591	HD13	ILE	31	15.797	-5.912	0.743	1.00	1.42	ACSY
	ATOM	592	C	ILE	31	15.353	-3.501	-4.439	1.00	0.88	ACSY
	ATOM	593	O	ILE	31	16.071	-3.241	-5.396	1.00	0.98	ACSY
	ATOM	594	N	GLY	32	14.020	-3.598	-4.448	1.00	0.83	ACSY
15	ATOM	595	HN	GLY	32	13.520	-3.793	-3.580	1.00	0.77	ACSY
	ATOM	596	CA	GLY	32	13.328	-3.443	-5.701	1.00	0.89	ACSY
	ATOM	597	HA1	GLY	32	12.611	-4.259	-5.764	1.00	0.91	ACSY
	ATOM	598	HA2	GLY	32	14.070	-3.566	-6.486	1.00	0.97	ACSY
	ATOM	599	C	GLY	32	12.628	-2.089	-5.833	1.00	0.92	ACSY
20	ATOM	600	O	GLY	32	12.104	-1.537	-4.876	1.00	1.40	ACSY
	ATOM	601	N	SER	33	12.672	-1.624	-7.104	1.00	0.97	ACSY
	ATOM	602	HN	SER	33	13.132	-2.162	-7.810	1.00	1.35	ACSY
	ATOM	603	CA	SER	33	12.054	-0.346	-7.460	1.00	0.96	ACSY
	ATOM	604	HA	SER	33	11.133	-0.582	-7.989	1.00	0.99	ACSY
25	ATOM	605	CB	SER	33	11.750	0.491	-6.214	1.00	0.90	ACSY
	ATOM	606	HB1	SER	33	10.952	0.035	-5.627	1.00	1.26	ACSY
	ATOM	607	HB2	SER	33	12.629	0.580	-5.578	1.00	1.21	ACSY
	ATOM	608	OG	SER	33	11.329	1.783	-6.570	1.00	1.66	ACSY
	ATOM	609	HG	SER	33	11.623	2.365	-5.881	1.00	1.90	ACSY
30	ATOM	610	C	SER	33	12.984	0.384	-8.436	1.00	1.11	ACSY
	ATOM	611	O	SER	33	13.387	-0.169	-9.452	1.00	1.60	ACSY
	ATOM	612	N	LYS	34	13.294	1.649	-8.076	1.00	1.03	ACSY
	ATOM	613	HN	LYS	34	12.926	2.046	-7.236	1.00	1.20	ACSY
	ATOM	614	CA	LYS	34	14.178	2.419	-8.940	1.00	1.14	ACSY
35	ATOM	615	HA	LYS	34	14.631	3.213	-8.341	1.00	1.17	ACSY
	ATOM	616	CB	LYS	34	15.231	1.487	-9.523	1.00	1.27	ACSY
	ATOM	617	HB1	LYS	34	15.416	0.670	-8.836	1.00	1.39	ACSY
	ATOM	618	HB2	LYS	34	14.848	1.039	-10.443	1.00	1.59	ACSY
	ATOM	619	CG	LYS	34	16.526	2.227	-9.830	1.00	1.56	ACSY

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	ATOM	620	HG1	LYS	34	16.882	1.932	-10.816	1.00	1.98	ACSY
	ATOM	621	HG2	LYS	34	16.327	3.297	-9.873	1.00	2.07	ACSY
	ATOM	622	CD	LYS	34	17.604	1.940	-8.785	1.00	1.57	ACSY
	ATOM	623	HD1	LYS	34	18.466	2.583	-8.965	1.00	2.08	ACSY
5	ATOM	624	HD2	LYS	34	17.229	2.189	-7.793	1.00	1.79	ACSY
	ATOM	625	CE	LYS	34	18.042	0.476	-8.819	1.00	1.98	ACSY
	ATOM	626	HE1	LYS	34	17.222	-0.176	-8.516	1.00	2.46	ACSY
	ATOM	627	HE2	LYS	34	18.340	0.189	-9.827	1.00	2.35	ACSY
	ATOM	628	NZ	LYS	34	19.169	0.213	-7.932	1.00	2.48	ACSY
10	ATOM	629	HZ1	LYS	34	18.904	0.450	-6.955	1.00	2.82	ACSY
	ATOM	630	HZ2	LYS	34	19.427	-0.793	-7.988	1.00	2.83	ACSY
	ATOM	631	HZ3	LYS	34	19.980	0.796	-8.223	1.00	2.84	ACSY
	ATOM	632	C	LYS	34	13.392	3.022	-10.090	1.00	1.20	ACSY
	ATOM	633	O	LYS	34	13.360	4.225	-10.315	1.00	1.30	ACSY
15	ATOM	634	N	THR	35	12.770	2.071	-10.791	1.00	1.22	ACSY
	ATOM	635	HN	THR	35	12.840	1.119	-10.507	1.00	1.19	ACSY
	ATOM	636	CA	THR	35	11.996	2.414	-11.968	1.00	1.35	ACSY
	ATOM	637	HA	THR	35	12.674	2.903	-12.659	1.00	1.51	ACSY
	ATOM	638	CB	THR	35	11.463	1.118	-12.553	1.00	1.47	ACSY
20	ATOM	639	HB	THR	35	10.411	1.028	-12.316	1.00	1.54	ACSY
	ATOM	640	OG1	THR	35	12.112	0.017	-11.959	1.00	1.54	ACSY
	ATOM	641	HG1	THR	35	11.493	-0.372	-11.356	1.00	1.78	ACSY
	ATOM	642	CG2	THR	35	11.664	1.065	-14.055	1.00	1.88	ACSY
	ATOM	643	HG21	THR	35	12.725	1.122	-14.301	1.00	2.17	ACSY
25	ATOM	644	HG22	THR	35	11.270	0.138	-14.465	1.00	2.18	ACSY
	ATOM	645	HG23	THR	35	11.159	1.897	-14.541	1.00	2.38	ACSY
	ATOM	646	C	THR	35	10.838	3.371	-11.673	1.00	1.26	ACSY
	ATOM	647	O	THR	35	10.049	3.716	-12.545	1.00	1.40	ACSY
	ATOM	648	N	ASN	36	10.791	3.768	-10.408	1.00	1.13	ACSY
30	ATOM	649	HN	ASN	36	11.467	3.432	-9.765	1.00	1.11	ACSY
	ATOM	650	CA	ASN	36	9.743	4.682	-10.001	1.00	1.11	ACSY
	ATOM	651	HA	ASN	36	9.774	4.746	-8.912	1.00	1.03	ACSY
	ATOM	652	CB	ASN	36	9.982	6.051	-10.639	1.00	1.32	ACSY
	ATOM	653	HB1	ASN	36	10.927	6.472	-10.296	1.00	1.36	ACSY
35	ATOM	654	HB2	ASN	36	10.037	5.961	-11.724	1.00	1.46	ACSY
	ATOM	655	CG	ASN	36	8.849	7.021	-10.280	1.00	1.40	ACSY
	ATOM	656	OD1	ASN	36	8.578	7.982	-10.989	1.00	1.87	ACSY
	ATOM	657	ND2	ASN	36	8.214	6.704	-9.135	1.00	1.73	ACSY
	ATOM	658	HD21	ASN	36	8.489	5.903	-8.604	1.00	2.24	ACSY

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	ATOM	659	HD22	ASN	36	7.458	7.265	-8.799	1.00	1.89	ACSY
	ATOM	660	C	ASN	36	8.395	4.111	-10.421	1.00	1.10	ACSY
	ATOM	661	O	ASN	36	7.967	4.217	-11.564	1.00	1.56	ACSY
	ATOM	662	N	GLY	37	7.767	3.500	-9.408	1.00	0.86	ACSY
5	ATOM	663	HN	GLY	37	8.185	3.468	-8.500	1.00	1.02	ACSY
	ATOM	664	CA	GLY	37	6.471	2.894	-9.647	1.00	0.82	ACSY
	ATOM	665	HA1	GLY	37	6.414	2.630	-10.702	1.00	0.97	ACSY
	ATOM	666	HA2	GLY	37	5.713	3.645	-9.425	1.00	0.91	ACSY
	ATOM	667	C	GLY	37	6.256	1.646	-8.779	1.00	0.74	ACSY
10	ATOM	668	O	GLY	37	5.163	1.097	-8.720	1.00	0.76	ACSY
	ATOM	669	N	LYS	38	7.357	1.229	-8.112	1.00	0.69	ACSY
	ATOM	670	HN	LYS	38	8.230	1.727	-8.173	1.00	0.73	ACSY
	ATOM	671	CA	LYS	38	7.224	0.062	-7.272	1.00	0.63	ACSY
	ATOM	672	HA	LYS	38	6.650	-0.681	-7.836	1.00	0.66	ACSY
15	ATOM	673	CB	LYS	38	8.600	-0.465	-6.891	1.00	0.64	ACSY
	ATOM	674	HB1	LYS	38	9.286	-0.306	-7.717	1.00	0.72	ACSY
	ATOM	675	HB2	LYS	38	8.978	0.107	-6.049	1.00	0.62	ACSY
	ATOM	676	CG	LYS	38	8.571	-1.950	-6.521	1.00	0.65	ACSY
	ATOM	677	HG1	LYS	38	9.029	-2.087	-5.542	1.00	0.85	ACSY
20	ATOM	678	HG2	LYS	38	7.540	-2.286	-6.434	1.00	0.96	ACSY
	ATOM	679	CD	LYS	38	9.309	-2.806	-7.551	1.00	1.12	ACSY
	ATOM	680	HD1	LYS	38	8.686	-2.936	-8.433	1.00	1.85	ACSY
	ATOM	681	HD2	LYS	38	10.210	-2.291	-7.877	1.00	1.68	ACSY
	ATOM	682	CE	LYS	38	9.685	-4.175	-6.983	1.00	1.08	ACSY
25	ATOM	683	HE1	LYS	38	10.256	-4.063	-6.061	1.00	1.37	ACSY
	ATOM	684	HE2	LYS	38	8.792	-4.752	-6.751	1.00	1.51	ACSY
	ATOM	685	NZ	LYS	38	10.491	-4.959	-7.911	1.00	1.82	ACSY
	ATOM	686	HZ1	LYS	38	9.949	-5.130	-8.782	1.00	2.15	ACSY
	ATOM	687	HZ2	LYS	38	11.362	-4.439	-8.141	1.00	2.24	ACSY
30	ATOM	688	HZ3	LYS	38	10.737	-5.869	-7.471	1.00	2.41	ACSY
	ATOM	689	C	LYS	38	6.450	0.467	-6.036	1.00	0.53	ACSY
	ATOM	690	O	LYS	38	6.551	1.586	-5.548	1.00	0.51	ACSY
	ATOM	691	N	PHE	39	5.675	-0.506	-5.563	1.00	0.49	ACSY
	ATOM	692	HN	PHE	39	5.671	-1.410	-6.000	1.00	0.53	ACSY
35	ATOM	693	CA	PHE	39	4.872	-0.202	-4.389	1.00	0.42	ACSY
	ATOM	694	HA	PHE	39	5.507	0.383	-3.710	1.00	0.38	ACSY
	ATOM	695	CB	PHE	39	3.655	0.623	-4.820	1.00	0.44	ACSY
	ATOM	696	HB1	PHE	39	3.227	1.128	-3.956	1.00	0.64	ACSY
	ATOM	697	HB2	PHE	39	3.952	1.391	-5.533	1.00	0.54	ACSY

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	ATOM	698	CG	PHE	39	2.587	-0.237	-5.437	1.00	0.48	ACSY
	ATOM	699	CD1	PHE	39	1.456	-0.603	-4.673	1.00	0.50	ACSY
	ATOM	700	HD1	PHE	39	1.369	-0.265	-3.652	1.00	0.48	ACSY
	ATOM	701	CD2	PHE	39	2.698	-0.689	-6.774	1.00	0.55	ACSY
5	ATOM	702	HD2	PHE	39	3.559	-0.414	-7.365	1.00	0.57	ACSY
	ATOM	703	CE1	PHE	39	0.444	-1.410	-5.233	1.00	0.57	ACSY
	ATOM	704	HE1	PHE	39	-0.418	-1.677	-4.643	1.00	0.61	ACSY
	ATOM	705	CE2	PHE	39	1.685	-1.499	-7.337	1.00	0.61	ACSY
	ATOM	706	HE2	PHE	39	1.773	-1.842	-8.357	1.00	0.67	ACSY
10	ATOM	707	CZ	PHE	39	0.558	-1.858	-6.566	1.00	0.62	ACSY
	ATOM	708	HZ	PHE	39	-0.217	-2.477	-6.996	1.00	0.69	ACSY
	ATOM	709	C	PHE	39	4.407	-1.469	-3.673	1.00	0.42	ACSY
	ATOM	710	O	PHE	39	4.351	-2.552	-4.232	1.00	0.52	ACSY
	ATOM	711	N	LEU	40	4.039	-1.224	-2.406	1.00	0.42	ACSY
15	ATOM	712	HN	LEU	40	4.138	-0.306	-2.021	1.00	0.45	ACSY
	ATOM	713	CA	LEU	40	3.524	-2.311	-1.595	1.00	0.49	ACSY
	ATOM	714	HA	LEU	40	2.895	-2.930	-2.240	1.00	0.56	ACSY
	ATOM	715	CB	LEU	40	4.673	-3.120	-1.014	1.00	0.52	ACSY
	ATOM	716	HB1	LEU	40	4.298	-4.060	-0.618	1.00	0.67	ACSY
20	ATOM	717	HB2	LEU	40	5.372	-3.376	-1.801	1.00	0.70	ACSY
	ATOM	718	CG	LEU	40	5.388	-2.340	0.087	1.00	0.48	ACSY
	ATOM	719	HG	LEU	40	5.379	-1.282	-0.181	1.00	0.45	ACSY
	ATOM	720	CD1	LEU	40	4.660	-2.505	1.422	1.00	0.58	ACSY
	ATOM	721	HD11	LEU	40	5.225	-3.148	2.094	1.00	1.04	ACSY
25	ATOM	722	HD12	LEU	40	4.523	-1.541	1.912	1.00	1.23	ACSY
	ATOM	723	HD13	LEU	40	3.678	-2.954	1.278	1.00	1.20	ACSY
	ATOM	724	CD2	LEU	40	6.839	-2.800	0.211	1.00	0.52	ACSY
	ATOM	725	HD21	LEU	40	7.312	-2.860	-0.767	1.00	1.19	ACSY
	ATOM	726	HD22	LEU	40	7.415	-2.105	0.821	1.00	1.08	ACSY
30	ATOM	727	HD23	LEU	40	6.896	-3.784	0.674	1.00	1.14	ACSY
	ATOM	728	C	LEU	40	2.671	-1.720	-0.476	1.00	0.52	ACSY
	ATOM	729	O	LEU	40	3.115	-0.883	0.300	1.00	0.53	ACSY
	ATOM	730	N	ILE	41	1.422	-2.208	-0.448	1.00	0.64	ACSY
	ATOM	731	HN	ILE	41	1.124	-2.889	-1.117	1.00	0.74	ACSY
35	ATOM	732	CA	ILE	41	0.516	-1.724	0.576	1.00	0.70	ACSY
	ATOM	733	HA	ILE	41	0.826	-0.707	0.829	1.00	0.67	ACSY
	ATOM	734	CB	ILE	41	-0.911	-1.738	0.042	1.00	0.80	ACSY
	ATOM	735	HB	ILE	41	-0.977	-1.034	-0.788	1.00	0.83	ACSY
	ATOM	736	CG2	ILE	41	-1.278	-3.128	-0.472	1.00	0.90	ACSY

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	ATOM	737	HG21	ILE	41	-0.995	-3.896	0.249	1.00	1.49	ACSY
	ATOM	738	HG22	ILE	41	-2.350	-3.208	-0.646	1.00	1.13	ACSY
	ATOM	739	HG23	ILE	41	-0.768	-3.341	-1.410	1.00	1.37	ACSY
	ATOM	740	CG1	ILE	41	-1.891	-1.304	1.131	1.00	0.86	ACSY
5	ATOM	741	HG11	ILE	41	-2.902	-1.319	0.733	1.00	1.11	ACSY
	ATOM	742	HG12	ILE	41	-1.866	-2.020	1.954	1.00	1.31	ACSY
	ATOM	743	CD1	ILE	41	-1.568	0.096	1.653	1.00	1.08	ACSY
	ATOM	744	HD11	ILE	41	-0.538	0.152	2.002	1.00	1.64	ACSY
	ATOM	745	HD12	ILE	41	-1.699	0.842	0.870	1.00	1.56	ACSY
10	ATOM	746	HD13	ILE	41	-2.220	0.361	2.484	1.00	1.42	ACSY
	ATOM	747	C	ILE	41	0.639	-2.607	1.817	1.00	0.78	ACSY
	ATOM	748	O	ILE	41	0.994	-3.777	1.748	1.00	0.85	ACSY
	ATOM	749	N	ARG	42	0.322	-1.960	2.951	1.00	0.80	ACSY
	ATOM	750	HN	ARG	42	0.033	-1.004	2.926	1.00	0.76	ACSY
15	ATOM	751	CA	ARG	42	0.399	-2.679	4.210	1.00	0.91	ACSY
	ATOM	752	HA	ARG	42	0.520	-3.740	3.974	1.00	0.94	ACSY
	ATOM	753	CB	ARG	42	1.587	-2.161	5.019	1.00	1.00	ACSY
	ATOM	754	HB1	ARG	42	2.518	-2.477	4.547	1.00	1.43	ACSY
	ATOM	755	HB2	ARG	42	1.585	-1.071	5.013	1.00	1.42	ACSY
20	ATOM	756	CG	ARG	42	1.545	-2.666	6.462	1.00	1.50	ACSY
	ATOM	757	HG1	ARG	42	0.576	-2.430	6.902	1.00	2.14	ACSY
	ATOM	758	HG2	ARG	42	1.639	-3.752	6.473	1.00	2.02	ACSY
	ATOM	759	CD	ARG	42	2.656	-2.045	7.308	1.00	1.83	ACSY
	ATOM	760	HD1	ARG	42	2.625	-0.955	7.276	1.00	2.28	ACSY
25	ATOM	761	HD2	ARG	42	3.642	-2.375	6.986	1.00	2.31	ACSY
	ATOM	762	NE	ARG	42	2.509	-2.442	8.697	1.00	2.09	ACSY
	ATOM	763	HE	ARG	42	3.147	-3.091	9.113	1.00	2.61	ACSY
	ATOM	764	CZ	ARG	42	1.494	-1.924	9.413	1.00	2.42	ACSY
	ATOM	765	NH1	ARG	42	1.330	-2.277	10.684	1.00	3.12	ACSY
30	ATOM	766	HH11	ARG	42	1.960	-2.927	11.108	1.00	3.45	ACSY
	ATOM	767	HH12	ARG	42	0.575	-1.892	11.216	1.00	3.59	ACSY
	ATOM	768	NH2	ARG	42	0.655	-1.058	8.850	1.00	2.75	ACSY
	ATOM	769	HH21	ARG	42	0.779	-0.791	7.894	1.00	2.71	ACSY
	ATOM	770	HH22	ARG	42	-0.099	-0.674	9.382	1.00	3.42	ACSY
35	ATOM	771	C	ARG	42	-0.901	-2.482	4.987	1.00	0.99	ACSY
	ATOM	772	O	ARG	42	-1.425	-1.380	5.100	1.00	0.97	ACSY
	ATOM	773	N	ALA	43	-1.381	-3.624	5.509	1.00	1.16	ACSY
	ATOM	774	HN	ALA	43	-0.899	-4.490	5.373	1.00	1.23	ACSY
	ATOM	775	CA	ALA	43	-2.614	-3.571	6.274	1.00	1.30	ACSY

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	ATOM	776	HA	ALA	43	-2.573	-2.672	6.895	1.00	1.24	ACSY
	ATOM	777	CB	ALA	43	-3.804	-3.518	5.318	1.00	1.53	ACSY
	ATOM	778	HB1	ALA	43	-3.818	-4.391	4.666	1.00	2.07	ACSY
	ATOM	779	HB2	ALA	43	-4.744	-3.493	5.869	1.00	1.83	ACSY
5	ATOM	780	HB3	ALA	43	-3.758	-2.628	4.689	1.00	1.84	ACSY
	ATOM	781	C	ALA	43	-2.708	-4.799	7.179	1.00	1.63	ACSY
	ATOM	782	O	ALA	43	-2.897	-5.922	6.729	1.00	2.22	ACSY
	ATOM	783	N	ARG	44	-2.562	-4.502	8.483	1.00	1.75	ACSY
	ATOM	784	HN	ARG	44	-2.409	-3.559	8.777	1.00	1.96	ACSY
10	ATOM	785	CA	ARG	44	-2.633	-5.581	9.453	1.00	2.10	ACSY
	ATOM	786	HA	ARG	44	-2.194	-6.468	8.987	1.00	2.37	ACSY
	ATOM	787	CB	ARG	44	-1.859	-5.188	10.710	1.00	2.62	ACSY
	ATOM	788	HB1	ARG	44	-2.249	-4.248	11.101	1.00	2.91	ACSY
	ATOM	789	HB2	ARG	44	-2.013	-5.939	11.484	1.00	3.07	ACSY
15	ATOM	790	CG	ARG	44	-0.363	-5.046	10.433	1.00	3.13	ACSY
	ATOM	791	HG1	ARG	44	0.004	-5.946	9.939	1.00	3.33	ACSY
	ATOM	792	HG2	ARG	44	-0.192	-4.217	9.746	1.00	3.36	ACSY
	ATOM	793	CD	ARG	44	0.421	-4.815	11.724	1.00	3.97	ACSY
	ATOM	794	HD1	ARG	44	0.214	-3.832	12.150	1.00	4.35	ACSY
20	ATOM	795	HD2	ARG	44	1.495	-4.908	11.568	1.00	4.27	ACSY
	ATOM	796	NE	ARG	44	0.050	-5.805	12.719	1.00	4.54	ACSY
	ATOM	797	HE	ARG	44	-0.714	-6.430	12.557	1.00	4.82	ACSY
	ATOM	798	CZ	ARG	44	0.752	-5.865	13.866	1.00	5.05	ACSY
	ATOM	799	NH1	ARG	44	0.430	-6.761	14.795	1.00	5.75	ACSY
25	ATOM	800	HH11	ARG	44	-0.333	-7.389	14.640	1.00	5.94	ACSY
	ATOM	801	HH12	ARG	44	0.951	-6.807	15.647	1.00	6.24	ACSY
	ATOM	802	NH2	ARG	44	1.767	-5.029	14.072	1.00	5.19	ACSY
	ATOM	803	HH21	ARG	44	2.008	-4.354	13.375	1.00	4.89	ACSY
	ATOM	804	HH22	ARG	44	2.287	-5.075	14.925	1.00	5.82	ACSY
30	ATOM	805	C	ARG	44	-4.097	-5.864	9.791	1.00	2.44	ACSY
	ATOM	806	O	ARG	44	-5.004	-5.588	9.015	1.00	2.92	ACSY
	ATOM	807	N	ASP	45	-4.259	-6.430	11.001	1.00	2.85	ACSY
	ATOM	808	HN	ASP	45	-3.469	-6.628	11.581	1.00	2.99	ACSY
	ATOM	809	CA	ASP	45	-5.603	-6.750	11.446	1.00	3.58	ACSY
35	ATOM	810	HA	ASP	45	-6.245	-5.905	11.181	1.00	3.95	ACSY
	ATOM	811	CB	ASP	45	-6.073	-8.029	10.760	1.00	4.38	ACSY
	ATOM	812	HB1	ASP	45	-6.013	-7.927	9.677	1.00	4.56	ACSY
	ATOM	813	HB2	ASP	45	-5.448	-8.873	11.050	1.00	4.52	ACSY
	ATOM	814	CG	ASP	45	-7.521	-8.326	11.151	1.00	5.32	ACSY

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	ATOM	815	OD1	ASP	45	-8.418	-7.677	10.617	1.00	5.79	ACSY
	ATOM	816	OD2	ASP	45	-7.735	-9.206	11.984	1.00	5.88	ACSY
	ATOM	817	C	ASP	45	-5.605	-6.925	12.963	1.00	3.64	ACSY
	ATOM	818	O	ASP	45	-5.493	-8.026	13.488	1.00	3.97	ACSY
5	ATOM	819	N	ASN	46	-5.740	-5.763	13.627	1.00	3.82	ACSY
	ATOM	820	HN	ASN	46	-5.829	-4.899	13.131	1.00	4.02	ACSY
	ATOM	821	CA	ASN	46	-5.756	-5.792	15.078	1.00	4.17	ACSY
	ATOM	822	HA	ASN	46	-6.532	-6.500	15.382	1.00	4.53	ACSY
	ATOM	823	CB	ASN	46	-4.387	-6.233	15.592	1.00	4.87	ACSY
10	ATOM	824	HB1	ASN	46	-4.122	-7.211	15.189	1.00	5.11	ACSY
	ATOM	825	HB2	ASN	46	-3.615	-5.528	15.284	1.00	5.08	ACSY
	ATOM	826	CG	ASN	46	-4.406	-6.314	17.119	1.00	5.51	ACSY
	ATOM	827	OD1	ASN	46	-4.394	-7.387	17.711	1.00	5.75	ACSY
	ATOM	828	ND2	ASN	46	-4.436	-5.106	17.708	1.00	6.13	ACSY
15	ATOM	829	HD21	ASN	46	-4.444	-4.271	17.159	1.00	6.18	ACSY
	ATOM	830	HD22	ASN	46	-4.451	-5.024	18.704	1.00	6.74	ACSY
	ATOM	831	C	ASN	46	-6.109	-4.403	15.611	1.00	3.81	ACSY
	ATOM	832	O	ASN	46	-7.032	-4.227	16.395	1.00	4.09	ACSY
	ATOM	833	N	ASN	47	-5.309	-3.436	15.126	1.00	3.65	ACSY
20	ATOM	834	HN	ASN	47	-4.574	-3.656	14.484	1.00	3.92	ACSY
	ATOM	835	CA	ASN	47	-5.536	-2.065	15.553	1.00	3.57	ACSY
	ATOM	836	HA	ASN	47	-6.526	-1.772	15.194	1.00	3.82	ACSY
	ATOM	837	CB	ASN	47	-5.464	-1.986	17.076	1.00	4.12	ACSY
	ATOM	838	HB1	ASN	47	-6.266	-2.567	17.530	1.00	4.49	ACSY
25	ATOM	839	HB2	ASN	47	-4.517	-2.387	17.437	1.00	4.36	ACSY
	ATOM	840	CG	ASN	47	-5.591	-0.529	17.525	1.00	4.50	ACSY
	ATOM	841	OD1	ASN	47	-4.710	0.294	17.309	1.00	4.69	ACSY
	ATOM	842	ND2	ASN	47	-6.746	-0.275	18.164	1.00	5.07	ACSY
	ATOM	843	HD21	ASN	47	-7.421	-0.999	18.305	1.00	5.25	ACSY
30	ATOM	844	HD22	ASN	47	-6.949	0.643	18.507	1.00	5.55	ACSY
	ATOM	845	C	ASN	47	-4.484	-1.156	14.919	1.00	3.20	ACSY
	ATOM	846	O	ASN	47	-3.291	-1.435	14.936	1.00	3.63	ACSY
	ATOM	847	N	GLY	48	-5.012	-0.052	14.360	1.00	2.90	ACSY
	ATOM	848	HN	GLY	48	-5.998	0.109	14.383	1.00	3.10	ACSY
35	ATOM	849	CA	GLY	48	-4.120	0.898	13.722	1.00	2.89	ACSY
	ATOM	850	HA1	GLY	48	-3.167	0.397	13.555	1.00	3.50	ACSY
	ATOM	851	HA2	GLY	48	-3.974	1.729	14.413	1.00	3.36	ACSY
	ATOM	852	C	GLY	48	-4.706	1.396	12.399	1.00	2.07	ACSY
	ATOM	853	O	GLY	48	-5.874	1.751	12.303	1.00	2.14	ACSY

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	ATOM	854	N	SER	49	-3.813	1.393	11.393	1.00	1.70	ACSY
	ATOM	855	HN	SER	49	-2.872	1.089	11.546	1.00	2.10	ACSY
	ATOM	856	CA	SER	49	-4.246	1.842	10.081	1.00	1.20	ACSY
	ATOM	857	HA	SER	49	-5.249	1.439	9.915	1.00	1.42	ACSY
5	ATOM	858	CB	SER	49	-4.264	3.368	10.044	1.00	1.53	ACSY
	ATOM	859	HB1	SER	49	-4.616	3.729	9.077	1.00	2.11	ACSY
	ATOM	860	HB2	SER	49	-4.924	3.768	10.813	1.00	2.00	ACSY
	ATOM	861	OG	SER	49	-2.976	3.886	10.260	1.00	2.00	ACSY
	ATOM	862	HG	SER	49	-3.047	4.829	10.192	1.00	2.35	ACSY
10	ATOM	863	C	SER	49	-3.303	1.289	9.012	1.00	1.13	ACSY
	ATOM	864	O	SER	49	-2.209	0.816	9.294	1.00	1.26	ACSY
	ATOM	865	N	TYR	50	-3.810	1.382	7.770	1.00	1.03	ACSY
	ATOM	866	HN	TYR	50	-4.714	1.782	7.618	1.00	1.07	ACSY
	ATOM	867	CA	TYR	50	-3.016	0.893	6.651	1.00	0.97	ACSY
15	ATOM	868	HA	TYR	50	-2.326	0.140	7.042	1.00	1.03	ACSY
	ATOM	869	CB	TYR	50	-3.935	0.293	5.576	1.00	1.02	ACSY
	ATOM	870	HB1	TYR	50	-4.479	1.088	5.067	1.00	1.00	ACSY
	ATOM	871	HB2	TYR	50	-3.339	-0.221	4.822	1.00	1.04	ACSY
	ATOM	872	CG	TYR	50	-4.930	-0.680	6.154	1.00	1.14	ACSY
20	ATOM	873	CD1	TYR	50	-4.662	-1.349	7.375	1.00	1.94	ACSY
	ATOM	874	HD1	TYR	50	-3.731	-1.169	7.893	1.00	2.71	ACSY
	ATOM	875	CE1	TYR	50	-5.606	-2.250	7.919	1.00	2.04	ACSY
	ATOM	876	HE1	TYR	50	-5.396	-2.755	8.851	1.00	2.86	ACSY
	ATOM	877	CD2	TYR	50	-6.154	-0.927	5.486	1.00	1.46	ACSY
25	ATOM	878	HD2	TYR	50	-6.368	-0.424	4.554	1.00	2.15	ACSY
	ATOM	879	CE2	TYR	50	-7.098	-1.828	6.030	1.00	1.54	ACSY
	ATOM	880	HE2	TYR	50	-8.030	-2.010	5.515	1.00	2.22	ACSY
	ATOM	881	CZ	TYR	50	-6.823	-2.489	7.246	1.00	1.40	ACSY
	ATOM	882	OH	TYR	50	-7.745	-3.368	7.778	1.00	1.54	ACSY
30	ATOM	883	HH	TYR	50	-7.413	-3.721	8.593	1.00	1.79	ACSY
	ATOM	884	C	TYR	50	-2.218	2.061	6.073	1.00	0.86	ACSY
	ATOM	885	O	TYR	50	-2.370	3.204	6.485	1.00	0.99	ACSY
	ATOM	886	N	ALA	51	-1.359	1.706	5.099	1.00	0.73	ACSY
	ATOM	887	HN	ALA	51	-1.271	0.753	4.808	1.00	0.79	ACSY
35	ATOM	888	CA	ALA	51	-0.566	2.758	4.484	1.00	0.64	ACSY
	ATOM	889	HA	ALA	51	-1.267	3.533	4.166	1.00	0.63	ACSY
	ATOM	890	CB	ALA	51	0.423	3.321	5.501	1.00	0.70	ACSY
	ATOM	891	HB1	ALA	51	1.028	4.111	5.056	1.00	1.06	ACSY
	ATOM	892	HB2	ALA	51	-0.100	3.742	6.360	1.00	1.35	ACSY

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	ATOM	893	HB3	ALA	51	1.096	2.545	5.864	1.00	1.32	ACSY
	ATOM	894	C	ALA	51	0.170	2.230	3.251	1.00	0.57	ACSY
	ATOM	895	O	ALA	51	0.835	1.202	3.275	1.00	0.65	ACSY
	ATOM	896	N	LEU	52	-0.001	3.026	2.179	1.00	0.47	ACSY
5	ATOM	897	HN	LEU	52	-0.580	3.841	2.248	1.00	0.49	ACSY
	ATOM	898	CA	LEU	52	0.636	2.681	0.915	1.00	0.41	ACSY
	ATOM	899	HA	LEU	52	0.565	1.597	0.793	1.00	0.45	ACSY
	ATOM	900	CB	LEU	52	-0.091	3.413	-0.211	1.00	0.42	ACSY
	ATOM	901	HB1	LEU	52	-0.946	2.821	-0.539	1.00	0.51	ACSY
10	ATOM	902	HB2	LEU	52	-0.486	4.355	0.166	1.00	0.45	ACSY
	ATOM	903	CG	LEU	52	0.825	3.693	-1.401	1.00	0.37	ACSY
	ATOM	904	HG	LEU	52	1.597	4.411	-1.091	1.00	0.35	ACSY
	ATOM	905	CD1	LEU	52	1.502	2.404	-1.871	1.00	0.43	ACSY
	ATOM	906	HD11	LEU	52	1.255	1.571	-1.212	1.00	1.05	ACSY
15	ATOM	907	HD12	LEU	52	1.179	2.140	-2.879	1.00	1.13	ACSY
	ATOM	908	HD13	LEU	52	2.586	2.514	-1.883	1.00	1.16	ACSY
	ATOM	909	CD2	LEU	52	0.016	4.312	-2.537	1.00	0.42	ACSY
	ATOM	910	HD21	LEU	52	-0.414	5.264	-2.229	1.00	0.95	ACSY
	ATOM	911	HD22	LEU	52	0.642	4.488	-3.409	1.00	1.11	ACSY
20	ATOM	912	HD23	LEU	52	-0.801	3.655	-2.835	1.00	1.13	ACSY
	ATOM	913	C	LEU	52	2.106	3.096	0.949	1.00	0.36	ACSY
	ATOM	914	O	LEU	52	2.448	4.200	1.334	1.00	0.39	ACSY
	ATOM	915	N	CYS	53	2.947	2.145	0.501	1.00	0.38	ACSY
	ATOM	916	HN	CYS	53	2.601	1.265	0.177	1.00	0.44	ACSY
25	ATOM	917	CA	CYS	53	4.373	2.434	0.500	1.00	0.38	ACSY
	ATOM	918	HA	CYS	53	4.490	3.501	0.712	1.00	0.40	ACSY
	ATOM	919	CB	CYS	53	5.058	1.592	1.573	1.00	0.49	ACSY
	ATOM	920	HB1	CYS	53	4.979	0.535	1.318	1.00	0.73	ACSY
	ATOM	921	HB2	CYS	53	6.121	1.832	1.609	1.00	0.87	ACSY
30	ATOM	922	SG	CYS	53	4.353	1.841	3.222	1.00	1.14	ACSY
	ATOM	923	HG	CYS	53	3.090	1.409	3.236	1.00	1.74	ACSY
	ATOM	924	C	CYS	53	4.976	2.130	-0.872	1.00	0.34	ACSY
	ATOM	925	O	CYS	53	5.041	0.989	-1.310	1.00	0.44	ACSY
	ATOM	926	N	LEU	54	5.419	3.230	-1.512	1.00	0.33	ACSY
35	ATOM	927	HN	LEU	54	5.333	4.135	-1.089	1.00	0.38	ACSY
	ATOM	928	CA	LEU	54	6.035	3.068	-2.825	1.00	0.36	ACSY
	ATOM	929	HA	LEU	54	6.309	2.013	-2.913	1.00	0.36	ACSY
	ATOM	930	CB	LEU	54	5.054	3.452	-3.942	1.00	0.45	ACSY
	ATOM	931	HB1	LEU	54	5.563	3.378	-4.902	1.00	1.31	ACSY

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	ATOM	932	HB2	LEU	54	4.248	2.724	-3.965	1.00	0.57	ACSY
	ATOM	933	CG	LEU	54	4.454	4.861	-3.799	1.00	0.42	ACSY
	ATOM	934	HG	LEU	54	4.083	5.165	-4.779	1.00	0.72	ACSY
	ATOM	935	CD1	LEU	54	3.272	4.856	-2.832	1.00	0.55	ACSY
5	ATOM	936	HD11	LEU	54	2.754	5.815	-2.849	1.00	1.22	ACSY
	ATOM	937	HD12	LEU	54	2.555	4.083	-3.102	1.00	1.16	ACSY
	ATOM	938	HD13	LEU	54	3.601	4.671	-1.811	1.00	1.05	ACSY
	ATOM	939	CD2	LEU	54	5.504	5.873	-3.348	1.00	0.59	ACSY
	ATOM	940	HD21	LEU	54	6.391	5.824	-3.978	1.00	1.17	ACSY
10	ATOM	941	HD22	LEU	54	5.111	6.889	-3.397	1.00	1.25	ACSY
	ATOM	942	HD23	LEU	54	5.806	5.679	-2.323	1.00	1.10	ACSY
	ATOM	943	C	LEU	54	7.313	3.900	-2.883	1.00	0.43	ACSY
	ATOM	944	O	LEU	54	7.617	4.666	-1.980	1.00	0.49	ACSY
	ATOM	945	N	LEU	55	8.059	3.691	-3.986	1.00	0.50	ACSY
15	ATOM	946	HN	LEU	55	7.787	3.019	-4.690	1.00	0.53	ACSY
	ATOM	947	CA	LEU	55	9.293	4.449	-4.103	1.00	0.62	ACSY
	ATOM	948	HA	LEU	55	9.333	5.134	-3.251	1.00	0.63	ACSY
	ATOM	949	CB	LEU	55	10.473	3.493	-4.072	1.00	0.65	ACSY
	ATOM	950	HB1	LEU	55	10.385	2.842	-3.211	1.00	0.59	ACSY
20	ATOM	951	HB2	LEU	55	10.442	2.853	-4.952	1.00	0.69	ACSY
	ATOM	952	CG	LEU	55	11.805	4.248	-4.033	1.00	0.77	ACSY
	ATOM	953	HG	LEU	55	11.627	5.274	-4.349	1.00	0.84	ACSY
	ATOM	954	CD1	LEU	55	12.397	4.274	-2.631	1.00	0.77	ACSY
	ATOM	955	HD11	LEU	55	11.642	4.062	-1.883	1.00	1.27	ACSY
25	ATOM	956	HD12	LEU	55	13.190	3.534	-2.535	1.00	1.29	ACSY
	ATOM	957	HD13	LEU	55	12.827	5.249	-2.414	1.00	1.20	ACSY
	ATOM	958	CD2	LEU	55	12.802	3.605	-4.983	1.00	0.84	ACSY
	ATOM	959	HD21	LEU	55	12.925	2.547	-4.750	1.00	1.24	ACSY
	ATOM	960	HD22	LEU	55	12.468	3.690	-6.013	1.00	1.34	ACSY
30	ATOM	961	HD23	LEU	55	13.777	4.084	-4.898	1.00	1.32	ACSY
	ATOM	962	C	LEU	55	9.307	5.264	-5.390	1.00	0.74	ACSY
	ATOM	963	O	LEU	55	8.897	4.810	-6.451	1.00	0.79	ACSY
	ATOM	964	N	HIS	56	9.811	6.501	-5.216	1.00	0.84	ACSY
	ATOM	965	HN	HIS	56	10.099	6.815	-4.309	1.00	0.83	ACSY
35	ATOM	966	CA	HIS	56	9.899	7.379	-6.367	1.00	0.97	ACSY
	ATOM	967	HA	HIS	56	8.998	7.214	-6.965	1.00	1.01	ACSY
	ATOM	968	CB	HIS	56	9.974	8.830	-5.895	1.00	1.00	ACSY
	ATOM	969	HB1	HIS	56	9.096	9.085	-5.301	1.00	1.00	ACSY
	ATOM	970	HB2	HIS	56	10.853	8.985	-5.270	1.00	1.10	ACSY

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	ATOM	971	CG	HIS	56	10.047	9.742	-7.096	1.00	1.31	ACSY
	ATOM	972	CD2	HIS	56	10.678	10.996	-7.193	1.00	2.03	ACSY
	ATOM	973	HD2	HIS	56	11.213	11.508	-6.408	1.00	2.72	ACSY
	ATOM	974	ND1	HIS	56	9.492	9.456	-8.294	1.00	1.62	ACSY
5	ATOM	975	HD1	HIS	56	8.987	8.651	-8.529	1.00	2.07	ACSY
	ATOM	976	CE1	HIS	56	9.771	10.495	-9.099	1.00	1.85	ACSY
	ATOM	977	HE1	HIS	56	9.460	10.565	-10.131	1.00	2.24	ACSY
	ATOM	978	NE2	HIS	56	10.485	11.437	-8.458	1.00	2.10	ACSY
	ATOM	979	C	HIS	56	11.135	7.004	-7.202	1.00	1.26	ACSY
10	ATOM	980	O	HIS	56	11.119	6.071	-7.991	1.00	2.14	ACSY
	ATOM	981	N	GLU	57	12.204	7.789	-6.970	1.00	1.18	ACSY
	ATOM	982	HN	GLU	57	12.150	8.542	-6.314	1.00	1.66	ACSY
	ATOM	983	CA	GLU	57	13.440	7.535	-7.711	1.00	1.28	ACSY
	ATOM	984	HA	GLU	57	13.248	6.710	-8.403	1.00	1.36	ACSY
15	ATOM	985	CB	GLU	57	13.801	8.802	-8.459	1.00	1.42	ACSY
	ATOM	986	HB1	GLU	57	14.040	9.577	-7.732	1.00	1.46	ACSY
	ATOM	987	HB2	GLU	57	14.698	8.639	-9.057	1.00	1.58	ACSY
	ATOM	988	CG	GLU	57	12.656	9.272	-9.356	1.00	1.51	ACSY
	ATOM	989	HG1	GLU	57	11.705	8.866	-9.011	1.00	1.60	ACSY
20	ATOM	990	HG2	GLU	57	12.577	10.357	-9.338	1.00	1.73	ACSY
	ATOM	991	CD	GLU	57	12.899	8.812	-10.795	1.00	1.74	ACSY
	ATOM	992	OE1	GLU	57	12.048	8.110	-11.339	1.00	2.07	ACSY
	ATOM	993	OE2	GLU	57	13.937	9.161	-11.355	1.00	2.29	ACSY
	ATOM	994	C	GLU	57	14.594	7.156	-6.767	1.00	1.28	ACSY
25	ATOM	995	O	GLU	57	15.756	7.113	-7.156	1.00	1.56	ACSY
	ATOM	996	N	GLY	58	14.195	6.890	-5.517	1.00	1.15	ACSY
	ATOM	997	HN	GLY	58	13.230	6.933	-5.286	1.00	1.21	ACSY
	ATOM	998	CA	GLY	58	15.182	6.535	-4.511	1.00	1.14	ACSY
	ATOM	999	HA1	GLY	58	16.152	6.846	-4.876	1.00	1.29	ACSY
30	ATOM	1000	HA2	GLY	58	15.169	5.451	-4.404	1.00	1.17	ACSY
	ATOM	1001	C	GLY	58	14.867	7.213	-3.169	1.00	1.10	ACSY
	ATOM	1002	O	GLY	58	15.744	7.559	-2.388	1.00	1.20	ACSY
	ATOM	1003	N	LYS	59	13.549	7.370	-2.981	1.00	0.98	ACSY
	ATOM	1004	HN	LYS	59	12.907	7.044	-3.661	1.00	0.94	ACSY
35	ATOM	1005	CA	LYS	59	13.050	7.969	-1.778	1.00	0.96	ACSY
	ATOM	1006	HA	LYS	59	13.756	7.745	-0.975	1.00	1.00	ACSY
	ATOM	1007	CB	LYS	59	12.862	9.468	-1.964	1.00	1.06	ACSY
	ATOM	1008	HB1	LYS	59	11.954	9.650	-2.536	1.00	1.09	ACSY
	ATOM	1009	HB2	LYS	59	12.720	9.936	-0.990	1.00	1.09	ACSY

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	ATOM	1010	CG	LYS	59	14.055	10.106	-2.673	1.00	1.30	ACSY
	ATOM	1011	HG1	LYS	59	14.129	11.154	-2.388	1.00	1.73	ACSY
	ATOM	1012	HG2	LYS	59	14.977	9.624	-2.346	1.00	1.75	ACSY
	ATOM	1013	CD	LYS	59	13.932	9.999	-4.194	1.00	1.40	ACSY
5	ATOM	1014	HD1	LYS	59	14.530	9.161	-4.552	1.00	1.77	ACSY
	ATOM	1015	HD2	LYS	59	12.897	9.785	-4.462	1.00	1.75	ACSY
	ATOM	1016	CE	LYS	59	14.385	11.287	-4.884	1.00	1.71	ACSY
	ATOM	1017	HE1	LYS	59	14.363	11.169	-5.967	1.00	2.09	ACSY
	ATOM	1018	HE2	LYS	59	13.721	12.112	-4.627	1.00	2.06	ACSY
10	ATOM	1019	NZ	LYS	59	15.739	11.674	-4.507	1.00	2.39	ACSY
	ATOM	1020	HZ1	LYS	59	16.406	10.933	-4.802	1.00	2.76	ACSY
	ATOM	1021	HZ2	LYS	59	15.986	12.570	-4.974	1.00	2.67	ACSY
	ATOM	1022	HZ3	LYS	59	15.790	11.796	-3.475	1.00	2.93	ACSY
	ATOM	1023	C	LYS	59	11.723	7.291	-1.506	1.00	0.83	ACSY
15	ATOM	1024	O	LYS	59	10.697	7.603	-2.101	1.00	0.79	ACSY
	ATOM	1025	N	VAL	60	11.819	6.338	-0.584	1.00	0.78	ACSY
	ATOM	1026	HN	VAL	60	12.690	6.150	-0.142	1.00	0.83	ACSY
	ATOM	1027	CA	VAL	60	10.630	5.584	-0.267	1.00	0.66	ACSY
	ATOM	1028	HA	VAL	60	10.224	5.206	-1.216	1.00	0.62	ACSY
20	ATOM	1029	CB	VAL	60	10.972	4.437	0.674	1.00	0.66	ACSY
	ATOM	1030	HB	VAL	60	11.963	4.058	0.423	1.00	0.70	ACSY
	ATOM	1031	CG1	VAL	60	10.982	4.933	2.114	1.00	0.73	ACSY
	ATOM	1032	HG11	VAL	60	11.681	5.759	2.235	1.00	1.16	ACSY
	ATOM	1033	HG12	VAL	60	9.991	5.285	2.406	1.00	1.28	ACSY
25	ATOM	1034	HG13	VAL	60	11.269	4.139	2.794	1.00	1.17	ACSY
	ATOM	1035	CG2	VAL	60	9.955	3.308	0.532	1.00	0.57	ACSY
	ATOM	1036	HG21	VAL	60	10.351	2.376	0.933	1.00	1.16	ACSY
	ATOM	1037	HG22	VAL	60	9.037	3.544	1.072	1.00	1.12	ACSY
	ATOM	1038	HG23	VAL	60	9.697	3.146	-0.512	1.00	1.05	ACSY
30	ATOM	1039	C	VAL	60	9.616	6.499	0.393	1.00	0.66	ACSY
	ATOM	1040	O	VAL	60	9.941	7.393	1.164	1.00	0.75	ACSY
	ATOM	1041	N	LEU	61	8.370	6.186	0.048	1.00	0.56	ACSY
	ATOM	1042	HN	LEU	61	8.204	5.437	-0.570	1.00	0.51	ACSY
	ATOM	1043	CA	LEU	61	7.285	6.965	0.591	1.00	0.57	ACSY
35	ATOM	1044	HA	LEU	61	7.710	7.604	1.366	1.00	0.65	ACSY
	ATOM	1045	CB	LEU	61	6.641	7.796	-0.508	1.00	0.58	ACSY
	ATOM	1046	HB1	LEU	61	6.023	7.167	-1.146	1.00	0.53	ACSY
	ATOM	1047	HB2	LEU	61	5.976	8.534	-0.069	1.00	0.62	ACSY
	ATOM	1048	CG	LEU	61	7.710	8.492	-1.323	1.00	0.68	ACSY

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	ATOM	1049	HG	LEU	61	8.308	7.738	-1.835	1.00	0.66	ACSY
	ATOM	1050	CD1	LEU	61	7.090	9.413	-2.368	1.00	0.75	ACSY
	ATOM	1051	HD11	LEU	61	7.859	9.995	-2.878	1.00	1.33	ACSY
	ATOM	1052	HD12	LEU	61	6.552	8.835	-3.117	1.00	1.20	ACSY
5	ATOM	1053	HD13	LEU	61	6.389	10.109	-1.908	1.00	1.22	ACSY
	ATOM	1054	CD2	LEU	61	8.609	9.268	-0.376	1.00	0.78	ACSY
	ATOM	1055	HD21	LEU	61	8.692	10.304	-0.682	1.00	1.25	ACSY
	ATOM	1056	HD22	LEU	61	8.209	9.248	0.639	1.00	1.39	ACSY
	ATOM	1057	HD23	LEU	61	9.605	8.834	-0.350	1.00	1.15	ACSY
10	ATOM	1058	C	LEU	61	6.252	6.080	1.228	1.00	0.50	ACSY
	ATOM	1059	O	LEU	61	6.206	4.868	1.051	1.00	0.47	ACSY
	ATOM	1060	N	HIS	62	5.422	6.800	1.975	1.00	0.51	ACSY
	ATOM	1061	HN	HIS	62	5.550	7.798	2.044	1.00	0.57	ACSY
	ATOM	1062	CA	HIS	62	4.350	6.118	2.676	1.00	0.51	ACSY
15	ATOM	1063	HA	HIS	62	4.120	5.215	2.103	1.00	0.44	ACSY
	ATOM	1064	CB	HIS	62	4.795	5.762	4.102	1.00	0.64	ACSY
	ATOM	1065	HB1	HIS	62	4.885	6.663	4.708	1.00	0.73	ACSY
	ATOM	1066	HB2	HIS	62	4.058	5.117	4.581	1.00	0.73	ACSY
	ATOM	1067	CG	HIS	62	6.135	5.049	4.069	1.00	0.68	ACSY
20	ATOM	1068	CD2	HIS	62	7.412	5.625	3.932	1.00	1.28	ACSY
	ATOM	1069	HD2	HIS	62	7.634	6.678	3.835	1.00	1.97	ACSY
	ATOM	1070	ND1	HIS	62	6.288	3.709	4.159	1.00	0.98	ACSY
	ATOM	1071	HD1	HIS	62	5.578	3.043	4.263	1.00	1.60	ACSY
	ATOM	1072	CE1	HIS	62	7.611	3.471	4.080	1.00	0.81	ACSY
25	ATOM	1073	HE1	HIS	62	8.058	2.487	4.121	1.00	1.04	ACSY
	ATOM	1074	NE2	HIS	62	8.308	4.612	3.942	1.00	1.17	ACSY
	ATOM	1075	C	HIS	62	3.122	7.030	2.698	1.00	0.53	ACSY
	ATOM	1076	O	HIS	62	3.223	8.236	2.842	1.00	0.81	ACSY
	ATOM	1077	N	TYR	63	1.961	6.378	2.529	1.00	0.51	ACSY
30	ATOM	1078	HN	TYR	63	1.939	5.396	2.393	1.00	0.72	ACSY
	ATOM	1079	CA	TYR	63	0.733	7.136	2.531	1.00	0.52	ACSY
	ATOM	1080	HA	TYR	63	0.957	8.138	2.910	1.00	0.55	ACSY
	ATOM	1081	CB	TYR	63	0.182	7.177	1.114	1.00	0.47	ACSY
	ATOM	1082	HB1	TYR	63	0.152	6.170	0.699	1.00	0.93	ACSY
35	ATOM	1083	HB2	TYR	63	-0.831	7.543	1.129	1.00	0.77	ACSY
	ATOM	1084	CG	TYR	63	1.010	8.044	0.211	1.00	0.45	ACSY
	ATOM	1085	CD1	TYR	63	1.729	7.461	-0.860	1.00	1.28	ACSY
	ATOM	1086	HD1	TYR	63	1.670	6.403	-1.030	1.00	2.17	ACSY
	ATOM	1087	CE1	TYR	63	2.514	8.256	-1.715	1.00	1.28	ACSY

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	ATOM	1088	HE1	TYR	63	3.059	7.796	-2.524	1.00	2.14	ACSY
	ATOM	1089	CD2	TYR	63	1.089	9.446	0.412	1.00	1.28	ACSY
	ATOM	1090	HD2	TYR	63	0.540	9.915	1.216	1.00	2.15	ACSY
	ATOM	1091	CE2	TYR	63	1.877	10.240	-0.446	1.00	1.33	ACSY
5	ATOM	1092	HE2	TYR	63	1.947	11.294	-0.276	1.00	2.22	ACSY
	ATOM	1093	CZ	TYR	63	2.589	9.648	-1.510	1.00	0.58	ACSY
	ATOM	1094	OH	TYR	63	3.359	10.430	-2.347	1.00	0.68	ACSY
	ATOM	1095	HH	TYR	63	3.797	9.878	-2.982	1.00	1.05	ACSY
	ATOM	1096	C	TYR	63	-0.273	6.447	3.445	1.00	0.60	ACSY
10	ATOM	1097	O	TYR	63	-0.650	5.306	3.228	1.00	0.80	ACSY
	ATOM	1098	N	ARG	64	-0.695	7.211	4.466	1.00	0.59	ACSY
	ATOM	1099	HN	ARG	64	-0.363	8.147	4.582	1.00	0.65	ACSY
	ATOM	1100	CA	ARG	64	-1.658	6.634	5.389	1.00	0.67	ACSY
	ATOM	1101	HA	ARG	64	-1.238	5.684	5.739	1.00	0.70	ACSY
15	ATOM	1102	CB	ARG	64	-1.914	7.570	6.566	1.00	0.72	ACSY
	ATOM	1103	HB1	ARG	64	-2.959	7.495	6.864	1.00	1.09	ACSY
	ATOM	1104	HB2	ARG	64	-1.325	7.240	7.418	1.00	1.24	ACSY
	ATOM	1105	CG	ARG	64	-1.584	9.028	6.234	1.00	1.73	ACSY
	ATOM	1106	HG1	ARG	64	-0.504	9.170	6.237	1.00	2.39	ACSY
20	ATOM	1107	HG2	ARG	64	-1.929	9.258	5.226	1.00	2.33	ACSY
	ATOM	1108	CD	ARG	64	-2.234	9.991	7.228	1.00	1.95	ACSY
	ATOM	1109	HD1	ARG	64	-1.823	9.873	8.231	1.00	2.17	ACSY
	ATOM	1110	HD2	ARG	64	-3.312	9.850	7.277	1.00	2.56	ACSY
	ATOM	1111	NE	ARG	64	-2.007	11.366	6.820	1.00	2.22	ACSY
25	ATOM	1112	HE	ARG	64	-2.669	11.842	6.242	1.00	2.64	ACSY
	ATOM	1113	CZ	ARG	64	-0.886	11.990	7.232	1.00	2.59	ACSY
	ATOM	1114	NH1	ARG	64	-0.655	13.248	6.869	1.00	3.34	ACSY
	ATOM	1115	HH11	ARG	64	-1.313	13.730	6.290	1.00	3.74	ACSY
	ATOM	1116	HH12	ARG	64	0.176	13.712	7.174	1.00	3.75	ACSY
30	ATOM	1117	NH2	ARG	64	-0.010	11.350	8.002	1.00	2.83	ACSY
	ATOM	1118	HH21	ARG	64	-0.181	10.404	8.276	1.00	2.84	ACSY
	ATOM	1119	HH22	ARG	64	0.821	11.816	8.306	1.00	3.37	ACSY
	ATOM	1120	C	ARG	64	-2.958	6.358	4.645	1.00	0.74	ACSY
	ATOM	1121	O	ARG	64	-3.435	7.160	3.852	1.00	1.34	ACSY
35	ATOM	1122	N	ILE	65	-3.492	5.169	4.959	1.00	0.74	ACSY
	ATOM	1123	HN	ILE	65	-3.032	4.563	5.603	1.00	1.15	ACSY
	ATOM	1124	CA	ILE	65	-4.732	4.777	4.314	1.00	0.78	ACSY
	ATOM	1125	HA	ILE	65	-5.128	5.657	3.800	1.00	0.75	ACSY
	ATOM	1126	CB	ILE	65	-4.436	3.661	3.325	1.00	0.81	ACSY

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	ATOM	1127	HB	ILE	65	-3.710	2.983	3.779	1.00	0.81	ACSY
	ATOM	1128	CG2	ILE	65	-5.704	2.870	3.001	1.00	1.05	ACSY
	ATOM	1129	HG21	ILE	65	-6.468	3.519	2.573	1.00	1.66	ACSY
	ATOM	1130	HG22	ILE	65	-5.495	2.077	2.283	1.00	1.37	ACSY
5	ATOM	1131	HG23	ILE	65	-6.117	2.411	3.899	1.00	1.48	ACSY
	ATOM	1132	CG1	ILE	65	-3.831	4.228	2.051	1.00	0.82	ACSY
	ATOM	1133	HG11	ILE	65	-4.622	4.508	1.357	1.00	1.30	ACSY
	ATOM	1134	HG12	ILE	65	-3.272	5.135	2.281	1.00	1.25	ACSY
	ATOM	1135	CD1	ILE	65	-2.911	3.207	1.403	1.00	0.86	ACSY
10	ATOM	1136	HD11	ILE	65	-3.485	2.448	0.875	1.00	1.50	ACSY
	ATOM	1137	HD12	ILE	65	-2.243	3.684	0.692	1.00	1.23	ACSY
	ATOM	1138	HD13	ILE	65	-2.305	2.705	2.157	1.00	1.39	ACSY
	ATOM	1139	C	ILE	65	-5.757	4.295	5.339	1.00	0.96	ACSY
	ATOM	1140	O	ILE	65	-5.561	3.310	6.040	1.00	1.18	ACSY
15	ATOM	1141	N	ASP	66	-6.863	5.059	5.367	1.00	0.95	ACSY
	ATOM	1142	HN	ASP	66	-6.934	5.874	4.797	1.00	0.90	ACSY
	ATOM	1143	CA	ASP	66	-7.942	4.692	6.257	1.00	1.13	ACSY
	ATOM	1144	HA	ASP	66	-7.945	3.602	6.335	1.00	1.31	ACSY
	ATOM	1145	CB	ASP	66	-7.759	5.335	7.618	1.00	1.41	ACSY
20	ATOM	1146	HB1	ASP	66	-6.738	5.221	7.963	1.00	1.63	ACSY
	ATOM	1147	HB2	ASP	66	-7.981	6.395	7.560	1.00	1.51	ACSY
	ATOM	1148	CG	ASP	66	-8.703	4.684	8.631	1.00	1.74	ACSY
	ATOM	1149	OD1	ASP	66	-8.651	3.465	8.783	1.00	2.12	ACSY
	ATOM	1150	OD2	ASP	66	-9.478	5.405	9.258	1.00	2.27	ACSY
25	ATOM	1151	C	ASP	66	-9.252	5.150	5.645	1.00	1.07	ACSY
	ATOM	1152	O	ASP	66	-9.294	5.809	4.617	1.00	1.32	ACSY
	ATOM	1153	N	LYS	67	-10.308	4.788	6.373	1.00	1.25	ACSY
	ATOM	1154	HN	LYS	67	-10.183	4.303	7.235	1.00	1.58	ACSY
	ATOM	1155	CA	LYS	67	-11.628	5.141	5.899	1.00	1.22	ACSY
30	ATOM	1156	HA	LYS	67	-11.573	5.207	4.808	1.00	1.15	ACSY
	ATOM	1157	CB	LYS	67	-12.617	4.064	6.335	1.00	1.34	ACSY
	ATOM	1158	HB1	LYS	67	-13.618	4.324	5.992	1.00	1.51	ACSY
	ATOM	1159	HB2	LYS	67	-12.359	3.114	5.867	1.00	1.51	ACSY
	ATOM	1160	CG	LYS	67	-12.623	3.907	7.851	1.00	1.53	ACSY
35	ATOM	1161	HG1	LYS	67	-12.083	4.738	8.301	1.00	2.00	ACSY
	ATOM	1162	HG2	LYS	67	-13.641	3.962	8.219	1.00	1.67	ACSY
	ATOM	1163	CD	LYS	67	-11.994	2.582	8.283	1.00	1.92	ACSY
	ATOM	1164	HD1	LYS	67	-11.023	2.464	7.803	1.00	2.32	ACSY
	ATOM	1165	HD2	LYS	67	-11.816	2.596	9.357	1.00	2.35	ACSY

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	ATOM	1166	CE	LYS	67	-12.889	1.395	7.929	1.00	2.17	ACSY
	ATOM	1167	HE1	LYS	67	-13.820	1.435	8.495	1.00	2.50	ACSY
	ATOM	1168	HE2	LYS	67	-13.144	1.409	6.870	1.00	2.34	ACSY
	ATOM	1169	NZ	LYS	67	-12.252	0.115	8.214	1.00	2.57	ACSY
5	ATOM	1170	HZ1	LYS	67	-11.401	0.013	7.626	1.00	2.87	ACSY
	ATOM	1171	HZ2	LYS	67	-11.986	0.076	9.219	1.00	3.05	ACSY
	ATOM	1172	HZ3	LYS	67	-12.915	-0.658	8.001	1.00	2.72	ACSY
	ATOM	1173	C	LYS	67	-12.033	6.501	6.464	1.00	1.37	ACSY
	ATOM	1174	O	LYS	67	-11.204	7.351	6.768	1.00	1.56	ACSY
10	ATOM	1175	N	ASP	68	-13.364	6.639	6.581	1.00	1.41	ACSY
	ATOM	1176	HN	ASP	68	-13.980	5.895	6.309	1.00	1.41	ACSY
	ATOM	1177	CA	ASP	68	-13.896	7.882	7.105	1.00	1.62	ACSY
	ATOM	1178	HA	ASP	68	-13.129	8.329	7.741	1.00	1.70	ACSY
	ATOM	1179	CB	ASP	68	-14.254	8.797	5.942	1.00	1.72	ACSY
15	ATOM	1180	HB1	ASP	68	-14.300	8.231	5.011	1.00	1.61	ACSY
	ATOM	1181	HB2	ASP	68	-15.230	9.250	6.101	1.00	2.02	ACSY
	ATOM	1182	CG	ASP	68	-13.205	9.902	5.804	1.00	1.96	ACSY
	ATOM	1183	OD1	ASP	68	-12.020	9.607	5.945	1.00	2.32	ACSY
	ATOM	1184	OD2	ASP	68	-13.586	11.046	5.557	1.00	2.39	ACSY
20	ATOM	1185	C	ASP	68	-15.134	7.572	7.938	1.00	1.77	ACSY
	ATOM	1186	O	ASP	68	-16.196	8.158	7.766	1.00	2.22	ACSY
	ATOM	1187	N	LYS	69	-14.920	6.607	8.848	1.00	1.68	ACSY
	ATOM	1188	HN	LYS	69	-14.018	6.186	8.942	1.00	1.77	ACSY
	ATOM	1189	CA	LYS	69	-16.030	6.185	9.693	1.00	1.82	ACSY
25	ATOM	1190	HA	LYS	69	-15.737	5.232	10.143	1.00	1.87	ACSY
	ATOM	1191	CB	LYS	69	-16.293	7.239	10.764	1.00	2.01	ACSY
	ATOM	1192	HB1	LYS	69	-16.568	8.182	10.293	1.00	2.15	ACSY
	ATOM	1193	HB2	LYS	69	-17.140	6.933	11.377	1.00	2.17	ACSY
	ATOM	1194	CG	LYS	69	-15.066	7.443	11.650	1.00	2.50	ACSY
30	ATOM	1195	HG1	LYS	69	-14.395	8.167	11.187	1.00	2.75	ACSY
	ATOM	1196	HG2	LYS	69	-15.371	7.864	12.608	1.00	2.88	ACSY
	ATOM	1197	CD	LYS	69	-14.323	6.127	11.878	1.00	3.02	ACSY
	ATOM	1198	HD1	LYS	69	-15.023	5.368	12.226	1.00	3.24	ACSY
	ATOM	1199	HD2	LYS	69	-13.917	5.769	10.930	1.00	3.05	ACSY
35	ATOM	1200	CE	LYS	69	-13.191	6.287	12.893	1.00	3.77	ACSY
	ATOM	1201	HE1	LYS	69	-12.472	7.032	12.552	1.00	4.07	ACSY
	ATOM	1202	HE2	LYS	69	-13.583	6.620	13.854	1.00	4.08	ACSY
	ATOM	1203	NZ	LYS	69	-12.467	5.041	13.117	1.00	4.38	ACSY
	ATOM	1204	HZ1	LYS	69	-13.126	4.316	13.466	1.00	4.70	ACSY

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	ATOM	1205	HZ2	LYS	69	-12.042	4.722	12.224	1.00	4.59	ACSY
	ATOM	1206	HZ3	LYS	69	-11.718	5.198	13.822	1.00	4.74	ACSY
	ATOM	1207	C	LYS	69	-17.277	5.944	8.837	1.00	1.81	ACSY
	ATOM	1208	O	LYS	69	-18.411	6.099	9.273	1.00	2.01	ACSY
5	ATOM	1209	N	THR	70	-16.968	5.553	7.593	1.00	1.66	ACSY
	ATOM	1210	HN	THR	70	-16.014	5.483	7.311	1.00	1.60	ACSY
	ATOM	1211	CA	THR	70	-18.004	5.255	6.645	1.00	1.68	ACSY
	ATOM	1212	HA	THR	70	-18.964	5.528	7.089	1.00	1.83	ACSY
	ATOM	1213	CB	THR	70	-17.709	6.052	5.385	1.00	1.63	ACSY
10	ATOM	1214	HB	THR	70	-16.640	6.255	5.341	1.00	1.55	ACSY
	ATOM	1215	OG1	THR	70	-18.371	7.291	5.441	1.00	1.81	ACSY
	ATOM	1216	HG1	THR	70	-19.295	7.103	5.531	1.00	1.95	ACSY
	ATOM	1217	CG2	THR	70	-18.118	5.300	4.130	1.00	1.62	ACSY
	ATOM	1218	HG21	THR	70	-17.566	4.363	4.051	1.00	1.96	ACSY
15	ATOM	1219	HG22	THR	70	-19.180	5.066	4.149	1.00	1.86	ACSY
	ATOM	1220	HG23	THR	70	-17.911	5.891	3.241	1.00	1.91	ACSY
	ATOM	1221	C	THR	70	-17.968	3.755	6.336	1.00	1.67	ACSY
	ATOM	1222	O	THR	70	-18.974	3.128	6.025	1.00	1.79	ACSY
	ATOM	1223	N	GLY	71	-16.728	3.235	6.447	1.00	1.59	ACSY
20	ATOM	1224	HN	GLY	71	-15.964	3.809	6.749	1.00	1.53	ACSY
	ATOM	1225	CA	GLY	71	-16.532	1.833	6.169	1.00	1.67	ACSY
	ATOM	1226	HA1	GLY	71	-17.512	1.401	6.014	1.00	1.80	ACSY
	ATOM	1227	HA2	GLY	71	-16.075	1.396	7.050	1.00	1.79	ACSY
	ATOM	1228	C	GLY	71	-15.651	1.599	4.933	1.00	1.52	ACSY
25	ATOM	1229	O	GLY	71	-15.118	0.517	4.717	1.00	1.62	ACSY
	ATOM	1230	N	LYS	72	-15.539	2.681	4.146	1.00	1.36	ACSY
	ATOM	1231	HN	LYS	72	-15.986	3.536	4.401	1.00	1.37	ACSY
	ATOM	1232	CA	LYS	72	-14.737	2.586	2.939	1.00	1.28	ACSY
	ATOM	1233	HA	LYS	72	-14.667	1.528	2.679	1.00	1.36	ACSY
30	ATOM	1234	CB	LYS	72	-15.400	3.380	1.816	1.00	1.29	ACSY
	ATOM	1235	HB1	LYS	72	-15.365	4.444	2.053	1.00	1.38	ACSY
	ATOM	1236	HB2	LYS	72	-14.836	3.246	0.893	1.00	1.42	ACSY
	ATOM	1237	CG	LYS	72	-16.851	2.951	1.599	1.00	1.65	ACSY
	ATOM	1238	HG1	LYS	72	-16.890	1.883	1.387	1.00	1.80	ACSY
35	ATOM	1239	HG2	LYS	72	-17.421	3.112	2.513	1.00	1.99	ACSY
	ATOM	1240	CD	LYS	72	-17.496	3.727	0.450	1.00	2.27	ACSY
	ATOM	1241	HD1	LYS	72	-17.213	4.778	0.515	1.00	2.73	ACSY
	ATOM	1242	HD2	LYS	72	-17.114	3.357	-0.502	1.00	2.64	ACSY
	ATOM	1243	CE	LYS	72	-19.020	3.605	0.475	1.00	2.74	ACSY

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	ATOM	1244	HE1	LYS	72	-19.321	2.558	0.439	1.00	2.96	ACSY
	ATOM	1245	HE2	LYS	72	-19.422	4.035	1.392	1.00	3.17	ACSY
	ATOM	1246	NZ	LYS	72	-19.651	4.286	-0.649	1.00	3.27	ACSY
	ATOM	1247	HZ1	LYS	72	-20.686	4.215	-0.561	1.00	3.63	ACSY
5	ATOM	1248	HZ2	LYS	72	-19.371	5.289	-0.648	1.00	3.46	ACSY
	ATOM	1249	HZ3	LYS	72	-19.346	3.842	-1.539	1.00	3.62	ACSY
	ATOM	1250	C	LYS	72	-13.342	3.128	3.221	1.00	1.20	ACSY
	ATOM	1251	O	LYS	72	-13.170	4.120	3.912	1.00	1.30	ACSY
	ATOM	1252	N	LEU	73	-12.363	2.429	2.621	1.00	1.12	ACSY
10	ATOM	1253	HN	LEU	73	-12.573	1.653	2.026	1.00	1.17	ACSY
	ATOM	1254	CA	LEU	73	-10.994	2.851	2.828	1.00	1.07	ACSY
	ATOM	1255	HA	LEU	73	-10.894	3.156	3.878	1.00	1.09	ACSY
	ATOM	1256	CB	LEU	73	-10.049	1.701	2.490	1.00	1.07	ACSY
	ATOM	1257	HB1	LEU	73	-10.307	1.293	1.513	1.00	1.23	ACSY
15	ATOM	1258	HB2	LEU	73	-9.034	2.080	2.411	1.00	1.08	ACSY
	ATOM	1259	CG	LEU	73	-10.098	0.587	3.536	1.00	1.12	ACSY
	ATOM	1260	HG	LEU	73	-11.121	0.215	3.600	1.00	1.31	ACSY
	ATOM	1261	CD1	LEU	73	-9.187	-0.567	3.120	1.00	1.13	ACSY
	ATOM	1262	HD11	LEU	73	-9.263	-1.397	3.822	1.00	1.55	ACSY
20	ATOM	1263	HD12	LEU	73	-9.455	-0.937	2.130	1.00	1.77	ACSY
	ATOM	1264	HD13	LEU	73	-8.145	-0.248	3.087	1.00	1.22	ACSY
	ATOM	1265	CD2	LEU	73	-9.680	1.120	4.909	1.00	1.21	ACSY
	ATOM	1266	HD21	LEU	73	-8.705	1.606	4.858	1.00	1.53	ACSY
	ATOM	1267	HD22	LEU	73	-10.400	1.848	5.281	1.00	1.71	ACSY
25	ATOM	1268	HD23	LEU	73	-9.615	0.311	5.637	1.00	1.59	ACSY
	ATOM	1269	C	LEU	73	-10.716	4.044	1.924	1.00	1.03	ACSY
	ATOM	1270	O	LEU	73	-11.383	4.262	0.923	1.00	1.10	ACSY
	ATOM	1271	N	SER	74	-9.696	4.802	2.346	1.00	0.98	ACSY
	ATOM	1272	HN	SER	74	-9.199	4.574	3.184	1.00	1.00	ACSY
30	ATOM	1273	CA	SER	74	-9.350	5.969	1.562	1.00	0.95	ACSY
	ATOM	1274	HA	SER	74	-9.233	5.644	0.524	1.00	0.94	ACSY
	ATOM	1275	CB	SER	74	-10.470	6.999	1.685	1.00	1.02	ACSY
	ATOM	1276	HB1	SER	74	-10.201	7.925	1.180	1.00	1.48	ACSY
	ATOM	1277	HB2	SER	74	-11.392	6.626	1.240	1.00	1.56	ACSY
35	ATOM	1278	OG	SER	74	-10.724	7.295	3.035	1.00	1.35	ACSY
	ATOM	1279	HG	SER	74	-11.419	7.940	3.046	1.00	1.36	ACSY
	ATOM	1280	C	SER	74	-8.034	6.564	2.052	1.00	0.91	ACSY
	ATOM	1281	O	SER	74	-7.308	5.984	2.851	1.00	1.21	ACSY
	ATOM	1282	N	ILE	75	-7.792	7.766	1.507	1.00	0.80	ACSY

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	ATOM	1283	HN	ILE	75	-8.442	8.166	0.861	1.00	0.98	ACSY
	ATOM	1284	CA	ILE	75	-6.581	8.479	1.864	1.00	0.76	ACSY
	ATOM	1285	HA	ILE	75	-6.269	8.131	2.851	1.00	0.79	ACSY
	ATOM	1286	CB	ILE	75	-5.511	8.203	0.808	1.00	0.72	ACSY
5	ATOM	1287	HB	ILE	75	-5.938	8.425	-0.169	1.00	1.16	ACSY
	ATOM	1288	CG2	ILE	75	-4.287	9.097	1.016	1.00	0.90	ACSY
	ATOM	1289	HG21	ILE	75	-3.615	8.669	1.759	1.00	1.48	ACSY
	ATOM	1290	HG22	ILE	75	-3.727	9.215	0.089	1.00	1.34	ACSY
	ATOM	1291	HG23	ILE	75	-4.581	10.088	1.359	1.00	1.53	ACSY
10	ATOM	1292	CG1	ILE	75	-5.094	6.733	0.832	1.00	0.90	ACSY
	ATOM	1293	HG11	ILE	75	-4.812	6.448	1.845	1.00	1.14	ACSY
	ATOM	1294	HG12	ILE	75	-5.941	6.107	0.553	1.00	1.40	ACSY
	ATOM	1295	CD1	ILE	75	-3.925	6.473	-0.121	1.00	0.83	ACSY
	ATOM	1296	HD11	ILE	75	-3.027	6.991	0.216	1.00	1.20	ACSY
15	ATOM	1297	HD12	ILE	75	-3.698	5.409	-0.178	1.00	1.33	ACSY
	ATOM	1298	HD13	ILE	75	-4.158	6.822	-1.127	1.00	1.27	ACSY
	ATOM	1299	C	ILE	75	-6.906	9.973	1.916	1.00	0.81	ACSY
	ATOM	1300	O	ILE	75	-7.672	10.490	1.113	1.00	0.86	ACSY
	ATOM	1301	N	PRO	76	-6.283	10.643	2.910	1.00	0.84	ACSY
20	ATOM	1302	CD	PRO	76	-5.351	10.026	3.835	1.00	0.85	ACSY
	ATOM	1303	HD1	PRO	76	-4.570	9.501	3.288	1.00	0.92	ACSY
	ATOM	1304	HD2	PRO	76	-5.872	9.307	4.466	1.00	0.94	ACSY
	ATOM	1305	CA	PRO	76	-6.467	12.066	3.108	1.00	0.92	ACSY
	ATOM	1306	HA	PRO	76	-7.478	12.256	3.461	1.00	1.01	ACSY
25	ATOM	1307	CB	PRO	76	-5.437	12.470	4.167	1.00	0.95	ACSY
	ATOM	1308	HB1	PRO	76	-4.694	13.143	3.740	1.00	0.94	ACSY
	ATOM	1309	HB2	PRO	76	-5.921	12.993	4.991	1.00	1.05	ACSY
	ATOM	1310	CG	PRO	76	-4.770	11.176	4.664	1.00	0.93	ACSY
	ATOM	1311	HG1	PRO	76	-3.689	11.230	4.540	1.00	0.92	ACSY
30	ATOM	1312	HG2	PRO	76	-4.974	11.023	5.724	1.00	1.02	ACSY
	ATOM	1313	C	PRO	76	-6.239	12.842	1.812	1.00	0.90	ACSY
	ATOM	1314	O	PRO	76	-7.151	13.420	1.232	1.00	1.03	ACSY
	ATOM	1315	N	GLU	77	-4.962	12.809	1.408	1.00	0.82	ACSY
	ATOM	1316	HN	GLU	77	-4.273	12.329	1.948	1.00	0.80	ACSY
35	ATOM	1317	CA	GLU	77	-4.600	13.494	0.178	1.00	0.84	ACSY
	ATOM	1318	HA	GLU	77	-5.197	14.409	0.128	1.00	0.96	ACSY
	ATOM	1319	CB	GLU	77	-3.111	13.821	0.209	1.00	0.90	ACSY
	ATOM	1320	HB1	GLU	77	-2.533	12.905	0.084	1.00	1.16	ACSY
	ATOM	1321	HB2	GLU	77	-2.859	14.468	-0.631	1.00	1.24	ACSY

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	ATOM	1322	CG	GLU	77	-2.715	14.500	1.520	1.00	1.34	ACSY
	ATOM	1323	HG1	GLU	77	-3.014	13.892	2.373	1.00	1.86	ACSY
	ATOM	1324	HG2	GLU	77	-1.636	14.637	1.571	1.00	1.80	ACSY
	ATOM	1325	CD	GLU	77	-3.396	15.867	1.621	1.00	2.06	ACSY
5	ATOM	1326	OE1	GLU	77	-4.001	16.145	2.655	1.00	2.62	ACSY
	ATOM	1327	OE2	GLU	77	-3.313	16.636	0.665	1.00	2.79	ACSY
	ATOM	1328	C	GLU	77	-4.931	12.612	-1.035	1.00	0.73	ACSY
	ATOM	1329	O	GLU	77	-5.307	13.094	-2.097	1.00	0.84	ACSY
	ATOM	1330	N	GLY	78	-4.766	11.293	-0.802	1.00	0.65	ACSY
10	ATOM	1331	HN	GLY	78	-4.457	10.971	0.091	1.00	0.74	ACSY
	ATOM	1332	CA	GLY	78	-5.037	10.353	-1.876	1.00	0.58	ACSY
	ATOM	1333	HA1	GLY	78	-4.888	9.351	-1.483	1.00	0.95	ACSY
	ATOM	1334	HA2	GLY	78	-4.305	10.533	-2.663	1.00	0.69	ACSY
	ATOM	1335	C	GLY	78	-6.463	10.510	-2.413	1.00	0.70	ACSY
15	ATOM	1336	O	GLY	78	-6.861	11.564	-2.893	1.00	0.97	ACSY
	ATOM	1337	N	LYS	79	-7.198	9.386	-2.295	1.00	0.65	ACSY
	ATOM	1338	HN	LYS	79	-6.806	8.558	-1.895	1.00	0.71	ACSY
	ATOM	1339	CA	LYS	79	-8.568	9.395	-2.775	1.00	0.74	ACSY
	ATOM	1340	HA	LYS	79	-8.879	10.435	-2.871	1.00	0.82	ACSY
20	ATOM	1341	CB	LYS	79	-8.617	8.689	-4.129	1.00	0.75	ACSY
	ATOM	1342	HB1	LYS	79	-7.683	8.833	-4.647	1.00	0.96	ACSY
	ATOM	1343	HB2	LYS	79	-8.719	7.617	-3.972	1.00	0.88	ACSY
	ATOM	1344	CG	LYS	79	-9.764	9.200	-4.998	1.00	1.02	ACSY
	ATOM	1345	HG1	LYS	79	-10.152	8.384	-5.607	1.00	1.25	ACSY
25	ATOM	1346	HG2	LYS	79	-10.584	9.539	-4.365	1.00	1.14	ACSY
	ATOM	1347	CD	LYS	79	-9.303	10.342	-5.904	1.00	1.32	ACSY
	ATOM	1348	HD1	LYS	79	-9.106	11.229	-5.303	1.00	1.40	ACSY
	ATOM	1349	HD2	LYS	79	-8.360	10.069	-6.381	1.00	1.43	ACSY
	ATOM	1350	CE	LYS	79	-10.344	10.668	-6.976	1.00	1.64	ACSY
30	ATOM	1351	HE1	LYS	79	-10.553	9.789	-7.586	1.00	1.84	ACSY
	ATOM	1352	HE2	LYS	79	-11.281	10.983	-6.517	1.00	1.93	ACSY
	ATOM	1353	NZ	LYS	79	-9.905	11.734	-7.868	1.00	2.44	ACSY
	ATOM	1354	HZ1	LYS	79	-9.728	12.597	-7.316	1.00	2.79	ACSY
	ATOM	1355	HZ2	LYS	79	-9.030	11.444	-8.350	1.00	2.96	ACSY
35	ATOM	1356	HZ3	LYS	79	-10.644	11.920	-8.575	1.00	2.83	ACSY
	ATOM	1357	C	LYS	79	-9.481	8.689	-1.770	1.00	0.85	ACSY
	ATOM	1358	O	LYS	79	-9.352	8.823	-0.561	1.00	1.10	ACSY
	ATOM	1359	N	LYS	80	-10.405	7.932	-2.379	1.00	0.88	ACSY
	ATOM	1360	HN	LYS	80	-10.416	7.887	-3.381	1.00	1.00	ACSY

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	ATOM	1361	CA	LYS	80	-11.366	7.178	-1.581	1.00	0.95	ACSY
	ATOM	1362	HA	LYS	80	-10.863	6.883	-0.657	1.00	0.94	ACSY
	ATOM	1363	CB	LYS	80	-12.586	8.049	-1.285	1.00	1.07	ACSY
	ATOM	1364	HB1	LYS	80	-12.873	8.595	-2.183	1.00	1.37	ACSY
5	ATOM	1365	HB2	LYS	80	-13.431	7.413	-1.020	1.00	1.48	ACSY
	ATOM	1366	CG	LYS	80	-12.314	9.034	-0.148	1.00	1.96	ACSY
	ATOM	1367	HG1	LYS	80	-11.456	9.658	-0.400	1.00	2.60	ACSY
	ATOM	1368	HG2	LYS	80	-12.049	8.485	0.755	1.00	2.58	ACSY
	ATOM	1369	CD	LYS	80	-13.528	9.919	0.133	1.00	2.13	ACSY
10	ATOM	1370	HD1	LYS	80	-13.769	10.504	-0.755	1.00	2.69	ACSY
	ATOM	1371	HD2	LYS	80	-14.396	9.294	0.342	1.00	2.42	ACSY
	ATOM	1372	CE	LYS	80	-13.276	10.858	1.313	1.00	2.10	ACSY
	ATOM	1373	HE1	LYS	80	-12.978	10.293	2.195	1.00	2.30	ACSY
	ATOM	1374	HE2	LYS	80	-12.473	11.558	1.081	1.00	2.28	ACSY
15	ATOM	1375	NZ	LYS	80	-14.457	11.638	1.664	1.00	2.59	ACSY
	ATOM	1376	HZ1	LYS	80	-14.752	12.210	0.847	1.00	2.95	ACSY
	ATOM	1377	HZ2	LYS	80	-15.229	10.996	1.934	1.00	2.99	ACSY
	ATOM	1378	HZ3	LYS	80	-14.233	12.266	2.463	1.00	2.80	ACSY
	ATOM	1379	C	LYS	80	-11.777	5.923	-2.354	1.00	0.98	ACSY
20	ATOM	1380	O	LYS	80	-12.191	5.986	-3.505	1.00	1.01	ACSY
	ATOM	1381	N	PHE	81	-11.632	4.782	-1.649	1.00	1.00	ACSY
	ATOM	1382	HN	PHE	81	-11.275	4.790	-0.723	1.00	1.02	ACSY
	ATOM	1383	CA	PHE	81	-11.970	3.532	-2.289	1.00	1.05	ACSY
	ATOM	1384	HA	PHE	81	-12.605	3.760	-3.149	1.00	1.08	ACSY
25	ATOM	1385	CB	PHE	81	-10.678	2.874	-2.724	1.00	1.00	ACSY
	ATOM	1386	HB1	PHE	81	-9.970	2.868	-1.899	1.00	0.95	ACSY
	ATOM	1387	HB2	PHE	81	-10.863	1.847	-2.995	1.00	1.07	ACSY
	ATOM	1388	CG	PHE	81	-10.071	3.595	-3.889	1.00	0.97	ACSY
	ATOM	1389	CD1	PHE	81	-9.065	4.571	-3.683	1.00	1.42	ACSY
30	ATOM	1390	HD1	PHE	81	-8.730	4.796	-2.680	1.00	2.20	ACSY
	ATOM	1391	CD2	PHE	81	-10.501	3.310	-5.207	1.00	1.66	ACSY
	ATOM	1392	HD2	PHE	81	-11.268	2.569	-5.373	1.00	2.45	ACSY
	ATOM	1393	CE1	PHE	81	-8.495	5.250	-4.784	1.00	1.43	ACSY
	ATOM	1394	HE1	PHE	81	-7.727	5.992	-4.621	1.00	2.17	ACSY
35	ATOM	1395	CE2	PHE	81	-9.931	3.990	-6.307	1.00	1.72	ACSY
	ATOM	1396	HE2	PHE	81	-10.266	3.769	-7.310	1.00	2.54	ACSY
	ATOM	1397	CZ	PHE	81	-8.928	4.960	-6.096	1.00	1.07	ACSY
	ATOM	1398	HZ	PHE	81	-8.493	5.479	-6.936	1.00	1.15	ACSY
	ATOM	1399	C	PHE	81	-12.721	2.604	-1.331	1.00	1.12	ACSY

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	ATOM	1400	O	PHE	81	-12.887	2.872	-0.144	1.00	1.13	ACSY
	ATOM	1401	N	ASP	82	-13.144	1.480	-1.942	1.00	1.17	ACSY
	ATOM	1402	HN	ASP	82	-12.957	1.330	-2.913	1.00	1.17	ACSY
	ATOM	1403	CA	ASP	82	-13.872	0.491	-1.169	1.00	1.25	ACSY
5	ATOM	1404	HA	ASP	82	-14.572	1.031	-0.524	1.00	1.29	ACSY
	ATOM	1405	CB	ASP	82	-14.617	-0.448	-2.114	1.00	1.33	ACSY
	ATOM	1406	HB1	ASP	82	-15.388	0.091	-2.665	1.00	1.38	ACSY
	ATOM	1407	HB2	ASP	82	-13.932	-0.883	-2.842	1.00	1.29	ACSY
	ATOM	1408	CG	ASP	82	-15.273	-1.576	-1.315	1.00	1.43	ACSY
10	ATOM	1409	OD1	ASP	82	-15.202	-2.724	-1.753	1.00	1.70	ACSY
	ATOM	1410	OD2	ASP	82	-15.845	-1.295	-0.263	1.00	1.95	ACSY
	ATOM	1411	C	ASP	82	-12.895	-0.295	-0.299	1.00	1.22	ACSY
	ATOM	1412	O	ASP	82	-13.065	-0.421	0.908	1.00	1.25	ACSY
	ATOM	1413	N	THR	83	-11.861	-0.814	-0.990	1.00	1.16	ACSY
15	ATOM	1414	HN	THR	83	-11.765	-0.669	-1.977	1.00	1.14	ACSY
	ATOM	1415	CA	THR	83	-10.873	-1.579	-0.271	1.00	1.13	ACSY
	ATOM	1416	HA	THR	83	-10.875	-1.227	0.764	1.00	1.14	ACSY
	ATOM	1417	CB	THR	83	-11.217	-3.065	-0.348	1.00	1.21	ACSY
	ATOM	1418	HB	THR	83	-10.445	-3.644	0.155	1.00	1.26	ACSY
20	ATOM	1419	OG1	THR	83	-11.227	-3.472	-1.694	1.00	1.23	ACSY
	ATOM	1420	HG1	THR	83	-12.129	-3.431	-1.985	1.00	1.47	ACSY
	ATOM	1421	CG2	THR	83	-12.573	-3.368	0.289	1.00	1.25	ACSY
	ATOM	1422	HG21	THR	83	-13.376	-2.863	-0.246	1.00	1.46	ACSY
	ATOM	1423	HG22	THR	83	-12.779	-4.439	0.274	1.00	1.73	ACSY
25	ATOM	1424	HG23	THR	83	-12.598	-3.035	1.327	1.00	1.64	ACSY
	ATOM	1425	C	THR	83	-9.515	-1.308	-0.894	1.00	1.03	ACSY
	ATOM	1426	O	THR	83	-9.391	-0.643	-1.915	1.00	1.00	ACSY
	ATOM	1427	N	LEU	84	-8.510	-1.867	-0.215	1.00	1.00	ACSY
	ATOM	1428	HN	LEU	84	-8.666	-2.396	0.613	1.00	1.05	ACSY
30	ATOM	1429	CA	LEU	84	-7.173	-1.699	-0.685	1.00	0.92	ACSY
	ATOM	1430	HA	LEU	84	-6.979	-0.632	-0.760	1.00	0.87	ACSY
	ATOM	1431	CB	LEU	84	-6.299	-2.389	0.330	1.00	0.92	ACSY
	ATOM	1432	HB1	LEU	84	-6.898	-3.093	0.909	1.00	1.00	ACSY
	ATOM	1433	HB2	LEU	84	-5.574	-2.978	-0.193	1.00	0.92	ACSY
35	ATOM	1434	CG	LEU	84	-5.622	-1.416	1.282	1.00	0.90	ACSY
	ATOM	1435	HG	LEU	84	-6.380	-0.995	1.944	1.00	1.16	ACSY
	ATOM	1436	CD1	LEU	84	-4.601	-2.162	2.132	1.00	1.20	ACSY
	ATOM	1437	HD11	LEU	84	-5.101	-2.819	2.845	1.00	1.68	ACSY
	ATOM	1438	HD12	LEU	84	-3.953	-2.777	1.508	1.00	1.60	ACSY

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	ATOM	1439	HD13	LEU	84	-3.977	-1.469	2.691	1.00	1.73	ACSY
	ATOM	1440	CD2	LEU	84	-4.961	-0.278	0.507	1.00	0.96	ACSY
	ATOM	1441	HD21	LEU	84	-4.200	0.211	1.112	1.00	1.46	ACSY
	ATOM	1442	HD22	LEU	84	-4.487	-0.651	-0.400	1.00	1.33	ACSY
5	ATOM	1443	HD23	LEU	84	-5.696	0.474	0.220	1.00	1.56	ACSY
	ATOM	1444	C	LEU	84	-6.960	-2.336	-2.056	1.00	0.91	ACSY
	ATOM	1445	O	LEU	84	-5.899	-2.237	-2.648	1.00	0.84	ACSY
	ATOM	1446	N	TRP	85	-8.028	-2.982	-2.507	1.00	1.00	ACSY
	ATOM	1447	HN	TRP	85	-8.873	-2.979	-1.975	1.00	1.06	ACSY
10	ATOM	1448	CA	TRP	85	-7.958	-3.636	-3.800	1.00	1.02	ACSY
	ATOM	1449	HA	TRP	85	-6.931	-3.986	-3.945	1.00	0.97	ACSY
	ATOM	1450	CB	TRP	85	-8.967	-4.771	-3.822	1.00	1.13	ACSY
	ATOM	1451	HB1	TRP	85	-9.517	-4.792	-2.885	1.00	1.18	ACSY
	ATOM	1452	HB2	TRP	85	-9.691	-4.617	-4.622	1.00	1.17	ACSY
15	ATOM	1453	CG	TRP	85	-8.258	-6.083	-4.046	1.00	1.14	ACSY
	ATOM	1454	CD2	TRP	85	-8.087	-7.145	-3.107	1.00	1.33	ACSY
	ATOM	1455	CE2	TRP	85	-7.350	-8.172	-3.774	1.00	1.26	ACSY
	ATOM	1456	CE3	TRP	85	-8.487	-7.308	-1.787	1.00	1.64	ACSY
	ATOM	1457	HE3	TRP	85	-9.044	-6.530	-1.287	1.00	1.71	ACSY
20	ATOM	1458	CD1	TRP	85	-7.640	-6.471	-5.232	1.00	1.08	ACSY
	ATOM	1459	HD1	TRP	85	-7.597	-5.877	-6.135	1.00	1.13	ACSY
	ATOM	1460	NE1	TRP	85	-7.098	-7.716	-5.073	1.00	1.10	ACSY
	ATOM	1461	HE1	TRP	85	-6.609	-8.212	-5.762	1.00	1.10	ACSY
	ATOM	1462	CZ2	TRP	85	-7.024	-9.348	-3.110	1.00	1.47	ACSY
25	ATOM	1463	HZ2	TRP	85	-6.467	-10.122	-3.618	1.00	1.42	ACSY
	ATOM	1464	CZ3	TRP	85	-8.160	-8.505	-1.100	1.00	1.91	ACSY
	ATOM	1465	HZ3	TRP	85	-8.467	-8.640	-0.074	1.00	2.21	ACSY
	ATOM	1466	CH2	TRP	85	-7.428	-9.526	-1.763	1.00	1.81	ACSY
	ATOM	1467	HH2	TRP	85	-7.178	-10.437	-1.240	1.00	2.03	ACSY
30	ATOM	1468	C	TRP	85	-8.303	-2.649	-4.891	1.00	1.01	ACSY
	ATOM	1469	O	TRP	85	-7.844	-2.737	-6.023	1.00	1.00	ACSY
	ATOM	1470	N	GLN	86	-9.143	-1.707	-4.468	1.00	1.04	ACSY
	ATOM	1471	HN	GLN	86	-9.435	-1.683	-3.501	1.00	1.05	ACSY
	ATOM	1472	CA	GLN	86	-9.564	-0.712	-5.420	1.00	1.05	ACSY
35	ATOM	1473	HA	GLN	86	-9.489	-1.171	-6.403	1.00	1.08	ACSY
	ATOM	1474	CB	GLN	86	-10.992	-0.263	-5.119	1.00	1.15	ACSY
	ATOM	1475	HB1	GLN	86	-11.019	0.247	-4.157	1.00	1.16	ACSY
	ATOM	1476	HB2	GLN	86	-11.314	0.460	-5.868	1.00	1.18	ACSY
	ATOM	1477	CG	GLN	86	-11.960	-1.446	-5.099	1.00	1.24	ACSY

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	ATOM	1478	HG1	GLN	86	-11.718	-2.126	-4.282	1.00	1.35	ACSY
	ATOM	1479	HG2	GLN	86	-12.984	-1.103	-4.954	1.00	1.33	ACSY
	ATOM	1480	CD	GLN	86	-11.875	-2.210	-6.421	1.00	1.40	ACSY
	ATOM	1481	OE1	GLN	86	-11.463	-1.684	-7.448	1.00	1.73	ACSY
5	ATOM	1482	NE2	GLN	86	-12.291	-3.485	-6.319	1.00	1.91	ACSY
	ATOM	1483	HE21	GLN	86	-12.614	-3.848	-5.445	1.00	2.33	ACSY
	ATOM	1484	HE22	GLN	86	-12.285	-4.090	-7.115	1.00	2.19	ACSY
	ATOM	1485	C	GLN	86	-8.604	0.450	-5.387	1.00	0.94	ACSY
	ATOM	1486	O	GLN	86	-8.206	0.978	-6.406	1.00	0.92	ACSY
10	ATOM	1487	N	LEU	87	-8.239	0.813	-4.163	1.00	0.89	ACSY
	ATOM	1488	HN	LEU	87	-8.595	0.343	-3.346	1.00	0.92	ACSY
	ATOM	1489	CA	LEU	87	-7.304	1.910	-4.075	1.00	0.79	ACSY
	ATOM	1490	HA	LEU	87	-7.711	2.718	-4.689	1.00	0.80	ACSY
	ATOM	1491	CB	LEU	87	-7.136	2.341	-2.623	1.00	0.76	ACSY
15	ATOM	1492	HB1	LEU	87	-8.075	2.740	-2.250	1.00	0.82	ACSY
	ATOM	1493	HB2	LEU	87	-6.896	1.473	-2.008	1.00	0.77	ACSY
	ATOM	1494	CG	LEU	87	-6.040	3.394	-2.474	1.00	0.67	ACSY
	ATOM	1495	HG	LEU	87	-6.152	4.126	-3.274	1.00	0.67	ACSY
	ATOM	1496	CD1	LEU	87	-6.175	4.116	-1.135	1.00	0.69	ACSY
20	ATOM	1497	HD11	LEU	87	-6.047	3.422	-0.304	1.00	1.19	ACSY
	ATOM	1498	HD12	LEU	87	-5.423	4.899	-1.038	1.00	1.21	ACSY
	ATOM	1499	HD13	LEU	87	-7.157	4.578	-1.040	1.00	1.26	ACSY
	ATOM	1500	CD2	LEU	87	-4.661	2.743	-2.592	1.00	0.59	ACSY
	ATOM	1501	HD21	LEU	87	-4.747	1.657	-2.644	1.00	1.19	ACSY
25	ATOM	1502	HD22	LEU	87	-4.145	3.084	-3.489	1.00	1.08	ACSY
	ATOM	1503	HD23	LEU	87	-4.041	2.990	-1.733	1.00	1.22	ACSY
	ATOM	1504	C	LEU	87	-5.964	1.501	-4.681	1.00	0.72	ACSY
	ATOM	1505	O	LEU	87	-5.212	2.332	-5.165	1.00	0.66	ACSY
	ATOM	1506	N	VAL	88	-5.717	0.177	-4.646	1.00	0.74	ACSY
30	ATOM	1507	HN	VAL	88	-6.369	-0.466	-4.266	1.00	0.80	ACSY
	ATOM	1508	CA	VAL	88	-4.483	-0.294	-5.190	1.00	0.69	ACSY
	ATOM	1509	HA	VAL	88	-3.708	0.431	-4.939	1.00	0.61	ACSY
	ATOM	1510	CB	VAL	88	-4.167	-1.655	-4.620	1.00	0.71	ACSY
	ATOM	1511	HB	VAL	88	-5.089	-2.232	-4.566	1.00	0.79	ACSY
35	ATOM	1512	CG1	VAL	88	-3.214	-2.369	-5.557	1.00	0.70	ACSY
	ATOM	1513	HG11	VAL	88	-2.368	-1.727	-5.801	1.00	1.07	ACSY
	ATOM	1514	HG12	VAL	88	-2.841	-3.281	-5.112	1.00	1.28	ACSY
	ATOM	1515	HG13	VAL	88	-3.721	-2.622	-6.491	1.00	1.23	ACSY
	ATOM	1516	CG2	VAL	88	-3.568	-1.529	-3.223	1.00	0.68	ACSY

	ATOM	1517	HG21	VAL	88	-4.205	-0.917	-2.584	1.00	1.08	ACSY
	ATOM	1518	HG22	VAL	88	-3.461	-2.507	-2.758	1.00	1.32	ACSY
	ATOM	1519	HG23	VAL	88	-2.585	-1.063	-3.264	1.00	1.23	ACSY
	ATOM	1520	C	VAL	88	-4.591	-0.413	-6.691	1.00	0.74	ACSY
5	ATOM	1521	O	VAL	88	-3.748	0.061	-7.425	1.00	0.72	ACSY
	ATOM	1522	N	GLU	89	-5.662	-1.112	-7.097	1.00	0.85	ACSY
	ATOM	1523	HN	GLU	89	-6.349	-1.462	-6.439	1.00	0.88	ACSY
	ATOM	1524	CA	GLU	89	-5.812	-1.312	-8.522	1.00	0.92	ACSY
	ATOM	1525	HA	GLU	89	-4.903	-1.797	-8.869	1.00	0.91	ACSY
10	ATOM	1526	CB	GLU	89	-7.007	-2.188	-8.797	1.00	1.04	ACSY
	ATOM	1527	HB1	GLU	89	-7.058	-2.411	-9.856	1.00	1.10	ACSY
	ATOM	1528	HB2	GLU	89	-6.872	-3.120	-8.279	1.00	1.18	ACSY
	ATOM	1529	CG	GLU	89	-8.310	-1.553	-8.351	1.00	1.13	ACSY
	ATOM	1530	HG1	GLU	89	-8.924	-2.287	-7.840	1.00	1.22	ACSY
15	ATOM	1531	HG2	GLU	89	-8.122	-0.741	-7.660	1.00	1.15	ACSY
	ATOM	1532	CD	GLU	89	-9.073	-1.014	-9.563	1.00	1.40	ACSY
	ATOM	1533	OE1	GLU	89	-9.095	0.201	-9.750	1.00	1.89	ACSY
	ATOM	1534	OE2	GLU	89	-9.636	-1.816	-10.306	1.00	1.87	ACSY
	ATOM	1535	C	GLU	89	-5.953	0.022	-9.219	1.00	0.92	ACSY
20	ATOM	1536	O	GLU	89	-5.363	0.278	-10.261	1.00	0.94	ACSY
	ATOM	1537	N	HIS	90	-6.772	0.851	-8.574	1.00	0.91	ACSY
	ATOM	1538	HN	HIS	90	-7.226	0.559	-7.711	1.00	0.91	ACSY
	ATOM	1539	CA	HIS	90	-6.985	2.160	-9.159	1.00	0.91	ACSY
	ATOM	1540	HA	HIS	90	-7.441	2.007	-10.125	1.00	0.99	ACSY
25	ATOM	1541	CB	HIS	90	-7.847	3.019	-8.251	1.00	0.90	ACSY
	ATOM	1542	HB1	HIS	90	-8.606	2.423	-7.779	1.00	0.93	ACSY
	ATOM	1543	HB2	HIS	90	-7.242	3.464	-7.461	1.00	0.82	ACSY
	ATOM	1544	CG	HIS	90	-8.490	4.114	-9.066	1.00	0.95	ACSY
	ATOM	1545	CD2	HIS	90	-7.948	5.366	-9.409	1.00	0.95	ACSY
30	ATOM	1546	HD2	HIS	90	-6.973	5.740	-9.133	1.00	1.03	ACSY
	ATOM	1547	ND1	HIS	90	-9.727	4.030	-9.601	1.00	1.13	ACSY
	ATOM	1548	HD1	HIS	90	-10.348	3.275	-9.530	1.00	1.31	ACSY
	ATOM	1549	CE1	HIS	90	-9.939	5.187	-10.251	1.00	1.11	ACSY
	ATOM	1550	HE1	HIS	90	-10.845	5.426	-10.788	1.00	1.26	ACSY
35	ATOM	1551	NE2	HIS	90	-8.879	6.010	-10.150	1.00	1.01	ACSY
	ATOM	1552	C	HIS	90	-5.658	2.831	-9.357	1.00	0.84	ACSY
	ATOM	1553	O	HIS	90	-5.279	3.238	-10.440	1.00	0.88	ACSY
	ATOM	1554	N	TYR	91	-5.001	2.927	-8.218	1.00	0.74	ACSY
	ATOM	1555	HN	TYR	91	-5.406	2.574	-7.386	1.00	0.73	ACSY

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	ATOM	1556	CA	TYR	91	-3.701	3.552	-8.222	1.00	0.67	ACSY
	ATOM	1557	HA	TYR	91	-3.838	4.557	-8.627	1.00	0.69	ACSY
	ATOM	1558	CB	TYR	91	-3.164	3.628	-6.809	1.00	0.57	ACSY
	ATOM	1559	HB1	TYR	91	-3.467	2.753	-6.240	1.00	0.57	ACSY
5	ATOM	1560	HB2	TYR	91	-2.083	3.636	-6.831	1.00	0.53	ACSY
	ATOM	1561	CG	TYR	91	-3.669	4.873	-6.123	1.00	0.56	ACSY
	ATOM	1562	CD1	TYR	91	-2.866	5.559	-5.180	1.00	1.41	ACSY
	ATOM	1563	HD1	TYR	91	-1.873	5.200	-4.955	1.00	2.30	ACSY
	ATOM	1564	CE1	TYR	91	-3.355	6.724	-4.539	1.00	1.41	ACSY
10	ATOM	1565	HE1	TYR	91	-2.736	7.255	-3.839	1.00	2.30	ACSY
	ATOM	1566	CD2	TYR	91	-4.966	5.373	-6.414	1.00	1.27	ACSY
	ATOM	1567	HD2	TYR	91	-5.577	4.880	-7.148	1.00	2.16	ACSY
	ATOM	1568	CE2	TYR	91	-5.450	6.533	-5.773	1.00	1.27	ACSY
	ATOM	1569	HE2	TYR	91	-6.433	6.915	-6.017	1.00	2.15	ACSY
15	ATOM	1570	CZ	TYR	91	-4.645	7.206	-4.834	1.00	0.56	ACSY
	ATOM	1571	OH	TYR	91	-5.118	8.340	-4.205	1.00	0.58	ACSY
	ATOM	1572	HH	TYR	91	-5.995	8.529	-4.511	1.00	1.05	ACSY
	ATOM	1573	C	TYR	91	-2.756	2.782	-9.143	1.00	0.70	ACSY
	ATOM	1574	O	TYR	91	-1.780	3.320	-9.647	1.00	0.70	ACSY
20	ATOM	1575	N	SER	92	-3.099	1.489	-9.339	1.00	0.75	ACSY
	ATOM	1576	HN	SER	92	-3.901	1.067	-8.866	1.00	0.77	ACSY
	ATOM	1577	CA	SER	92	-2.281	0.713	-10.253	1.00	0.79	ACSY
	ATOM	1578	HA	SER	92	-1.260	0.710	-9.873	1.00	0.73	ACSY
	ATOM	1579	CB	SER	92	-2.853	-0.680	-10.324	1.00	0.84	ACSY
25	ATOM	1580	HB1	SER	92	-3.516	-0.841	-9.491	1.00	0.82	ACSY
	ATOM	1581	HB2	SER	92	-3.431	-0.811	-11.233	1.00	0.91	ACSY
	ATOM	1582	OG	SER	92	-1.838	-1.651	-10.290	1.00	0.82	ACSY
	ATOM	1583	HG	SER	92	-2.269	-2.496	-10.305	1.00	1.21	ACSY
	ATOM	1584	C	SER	92	-2.325	1.363	-11.641	1.00	0.87	ACSY
30	ATOM	1585	O	SER	92	-1.539	1.064	-12.533	1.00	0.91	ACSY
	ATOM	1586	N	TYR	93	-3.308	2.273	-11.737	1.00	0.89	ACSY
	ATOM	1587	HN	TYR	93	-3.883	2.467	-10.936	1.00	0.86	ACSY
	ATOM	1588	CA	TYR	93	-3.517	2.985	-12.972	1.00	0.97	ACSY
	ATOM	1589	HA	TYR	93	-3.215	2.336	-13.796	1.00	1.02	ACSY
35	ATOM	1590	CB	TYR	93	-4.985	3.386	-13.072	1.00	1.02	ACSY
	ATOM	1591	HB1	TYR	93	-5.218	4.130	-12.312	1.00	0.97	ACSY
	ATOM	1592	HB2	TYR	93	-5.167	3.856	-14.023	1.00	1.08	ACSY
	ATOM	1593	CG	TYR	93	-5.918	2.217	-12.907	1.00	1.06	ACSY
	ATOM	1594	CD1	TYR	93	-7.280	2.439	-12.595	1.00	1.54	ACSY

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	ATOM	1595	HD1	TYR	93	-7.641	3.450	-12.459	1.00	2.26	ACSY
	ATOM	1596	CE1	TYR	93	-8.165	1.348	-12.436	1.00	1.59	ACSY
	ATOM	1597	HE1	TYR	93	-9.202	1.524	-12.192	1.00	2.31	ACSY
	ATOM	1598	CD2	TYR	93	-5.449	0.888	-13.057	1.00	1.63	ACSY
5	ATOM	1599	HD2	TYR	93	-4.406	0.709	-13.275	1.00	2.37	ACSY
	ATOM	1600	CE2	TYR	93	-6.333	-0.204	-12.898	1.00	1.67	ACSY
	ATOM	1601	HE2	TYR	93	-5.967	-1.214	-13.007	1.00	2.41	ACSY
	ATOM	1602	CZ	TYR	93	-7.691	0.026	-12.588	1.00	1.16	ACSY
	ATOM	1603	OH	TYR	93	-8.554	-1.039	-12.434	1.00	1.23	ACSY
10	ATOM	1604	HH	TYR	93	-8.085	-1.849	-12.582	1.00	1.48	ACSY
	ATOM	1605	C	TYR	93	-2.678	4.242	-12.954	1.00	0.94	ACSY
	ATOM	1606	O	TYR	93	-1.841	4.488	-13.809	1.00	0.98	ACSY
	ATOM	1607	N	LYS	94	-3.031	5.029	-11.929	1.00	0.87	ACSY
	ATOM	1608	HN	LYS	94	-3.793	4.781	-11.361	1.00	0.86	ACSY
15	ATOM	1609	CA	LYS	94	-2.372	6.279	-11.711	1.00	0.85	ACSY
	ATOM	1610	HA	LYS	94	-1.506	6.337	-12.371	1.00	0.88	ACSY
	ATOM	1611	CB	LYS	94	-3.373	7.361	-11.999	1.00	0.88	ACSY
	ATOM	1612	HB1	LYS	94	-2.973	8.319	-11.689	1.00	0.86	ACSY
	ATOM	1613	HB2	LYS	94	-3.535	7.415	-13.055	1.00	0.96	ACSY
20	ATOM	1614	CG	LYS	94	-4.696	7.090	-11.267	1.00	0.87	ACSY
	ATOM	1615	HG1	LYS	94	-5.048	6.082	-11.495	1.00	0.90	ACSY
	ATOM	1616	HG2	LYS	94	-4.529	7.122	-10.188	1.00	0.79	ACSY
	ATOM	1617	CD	LYS	94	-5.773	8.102	-11.652	1.00	0.93	ACSY
	ATOM	1618	HD1	LYS	94	-6.461	8.239	-10.817	1.00	0.97	ACSY
25	ATOM	1619	HD2	LYS	94	-5.314	9.072	-11.844	1.00	0.94	ACSY
	ATOM	1620	CE	LYS	94	-6.550	7.643	-12.887	1.00	1.00	ACSY
	ATOM	1621	HE1	LYS	94	-5.873	7.465	-13.722	1.00	1.06	ACSY
	ATOM	1622	HE2	LYS	94	-7.077	6.710	-12.683	1.00	1.13	ACSY
	ATOM	1623	NZ	LYS	94	-7.538	8.625	-13.318	1.00	1.05	ACSY
30	ATOM	1624	HZ1	LYS	94	-8.225	8.784	-12.554	1.00	1.22	ACSY
	ATOM	1625	HZ2	LYS	94	-7.060	9.520	-13.546	1.00	1.48	ACSY
	ATOM	1626	HZ3	LYS	94	-8.033	8.271	-14.162	1.00	1.28	ACSY
	ATOM	1627	C	LYS	94	-1.950	6.436	-10.267	1.00	0.74	ACSY
	ATOM	1628	O	LYS	94	-2.132	5.579	-9.415	1.00	0.69	ACSY
35	ATOM	1629	N	ALA	95	-1.379	7.619	-10.084	1.00	0.73	ACSY
	ATOM	1630	HN	ALA	95	-1.244	8.223	-10.867	1.00	0.79	ACSY
	ATOM	1631	CA	ALA	95	-0.943	8.000	-8.756	1.00	0.65	ACSY
	ATOM	1632	HA	ALA	95	-0.569	7.101	-8.261	1.00	0.61	ACSY
	ATOM	1633	CB	ALA	95	0.147	9.064	-8.862	1.00	0.68	ACSY

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	ATOM	1634	HB1	ALA	95	-0.193	9.911	-9.458	1.00	1.18	ACSY
	ATOM	1635	HB2	ALA	95	0.424	9.437	-7.876	1.00	1.19	ACSY
	ATOM	1636	HB3	ALA	95	1.043	8.659	-9.333	1.00	1.17	ACSY
	ATOM	1637	C	ALA	95	-2.152	8.539	-7.986	1.00	0.63	ACSY
5	ATOM	1638	O	ALA	95	-2.392	8.199	-6.836	1.00	0.57	ACSY
	ATOM	1639	N	ASP	96	-2.903	9.392	-8.711	1.00	0.70	ACSY
	ATOM	1640	HN	ASP	96	-2.652	9.617	-9.653	1.00	0.75	ACSY
	ATOM	1641	CA	ASP	96	-4.090	9.981	-8.094	1.00	0.70	ACSY
	ATOM	1642	HA	ASP	96	-4.639	10.467	-8.876	1.00	0.77	ACSY
10	ATOM	1643	CB	ASP	96	-4.918	8.885	-7.457	1.00	0.69	ACSY
	ATOM	1644	HB1	ASP	96	-4.416	7.926	-7.558	1.00	0.79	ACSY
	ATOM	1645	HB2	ASP	96	-5.050	9.086	-6.398	1.00	0.74	ACSY
	ATOM	1646	CG	ASP	96	-6.294	8.806	-8.125	1.00	0.79	ACSY
	ATOM	1647	OD1	ASP	96	-6.887	7.729	-8.119	1.00	1.31	ACSY
15	ATOM	1648	OD2	ASP	96	-6.758	9.822	-8.640	1.00	1.32	ACSY
	ATOM	1649	C	ASP	96	-3.708	11.031	-7.049	1.00	0.66	ACSY
	ATOM	1650	O	ASP	96	-4.534	11.780	-6.541	1.00	0.69	ACSY
	ATOM	1651	N	GLY	97	-2.410	11.019	-6.779	1.00	0.63	ACSY
	ATOM	1652	HN	GLY	97	-1.826	10.370	-7.253	1.00	0.62	ACSY
20	ATOM	1653	CA	GLY	97	-1.873	11.951	-5.807	1.00	0.61	ACSY
	ATOM	1654	HA1	GLY	97	-2.565	11.987	-4.966	1.00	0.73	ACSY
	ATOM	1655	HA2	GLY	97	-1.836	12.931	-6.279	1.00	0.75	ACSY
	ATOM	1656	C	GLY	97	-0.472	11.532	-5.339	1.00	0.56	ACSY
	ATOM	1657	O	GLY	97	0.337	12.354	-4.926	1.00	0.58	ACSY
25	ATOM	1658	N	LEU	98	-0.238	10.205	-5.433	1.00	0.53	ACSY
	ATOM	1659	HN	LEU	98	-0.934	9.581	-5.788	1.00	0.54	ACSY
	ATOM	1660	CA	LEU	98	1.055	9.704	-5.021	1.00	0.50	ACSY
	ATOM	1661	HA	LEU	98	1.112	9.776	-3.925	1.00	0.46	ACSY
	ATOM	1662	CB	LEU	98	1.219	8.265	-5.497	1.00	0.48	ACSY
30	ATOM	1663	HB1	LEU	98	1.340	8.252	-6.580	1.00	0.55	ACSY
	ATOM	1664	HB2	LEU	98	2.129	7.848	-5.078	1.00	0.47	ACSY
	ATOM	1665	CG	LEU	98	0.038	7.395	-5.110	1.00	0.43	ACSY
	ATOM	1666	HG	LEU	98	-0.873	7.896	-5.408	1.00	0.47	ACSY
	ATOM	1667	CD1	LEU	98	0.100	6.066	-5.843	1.00	0.47	ACSY
35	ATOM	1668	HD11	LEU	98	-0.738	5.965	-6.534	1.00	1.15	ACSY
	ATOM	1669	HD12	LEU	98	1.022	5.980	-6.417	1.00	1.15	ACSY
	ATOM	1670	HD13	LEU	98	0.058	5.239	-5.139	1.00	1.03	ACSY
	ATOM	1671	CD2	LEU	98	0.026	7.185	-3.598	1.00	0.35	ACSY
	ATOM	1672	HD21	LEU	98	0.770	6.455	-3.298	1.00	1.06	ACSY

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	ATOM	1673	HD22	LEU	98	0.246	8.116	-3.082	1.00	0.99	ACSY
	ATOM	1674	HD23	LEU	98	-0.948	6.840	-3.260	1.00	0.89	ACSY
	ATOM	1675	C	LEU	98	2.138	10.548	-5.672	1.00	0.59	ACSY
	ATOM	1676	O	LEU	98	1.872	11.478	-6.424	1.00	0.68	ACSY
5	ATOM	1677	N	LEU	99	3.375	10.155	-5.342	1.00	0.64	ACSY
	ATOM	1678	HN	LEU	99	3.522	9.409	-4.691	1.00	0.64	ACSY
	ATOM	1679	CA	LEU	99	4.492	10.841	-5.957	1.00	0.74	ACSY
	ATOM	1680	HA	LEU	99	4.332	11.912	-5.828	1.00	0.78	ACSY
	ATOM	1681	CB	LEU	99	5.792	10.386	-5.303	1.00	0.79	ACSY
10	ATOM	1682	HB1	LEU	99	5.589	10.060	-4.285	1.00	0.75	ACSY
	ATOM	1683	HB2	LEU	99	6.186	9.521	-5.839	1.00	0.82	ACSY
	ATOM	1684	CG	LEU	99	6.841	11.497	-5.281	1.00	0.94	ACSY
	ATOM	1685	HG	LEU	99	7.754	11.098	-4.836	1.00	1.38	ACSY
	ATOM	1686	CD1	LEU	99	7.160	11.959	-6.700	1.00	1.40	ACSY
15	ATOM	1687	HD11	LEU	99	7.519	11.128	-7.306	1.00	2.02	ACSY
	ATOM	1688	HD12	LEU	99	6.274	12.371	-7.182	1.00	1.75	ACSY
	ATOM	1689	HD13	LEU	99	7.930	12.730	-6.693	1.00	1.88	ACSY
	ATOM	1690	CD2	LEU	99	6.357	12.675	-4.431	1.00	1.40	ACSY
	ATOM	1691	HD21	LEU	99	7.159	13.397	-4.277	1.00	1.86	ACSY
20	ATOM	1692	HD22	LEU	99	5.529	13.191	-4.916	1.00	1.85	ACSY
	ATOM	1693	HD23	LEU	99	6.017	12.335	-3.453	1.00	1.98	ACSY
	ATOM	1694	C	LEU	99	4.478	10.492	-7.450	1.00	0.78	ACSY
	ATOM	1695	O	LEU	99	4.691	11.328	-8.319	1.00	0.87	ACSY
	ATOM	1696	N	ARG	100	4.202	9.187	-7.665	1.00	0.73	ACSY
25	ATOM	1697	HN	ARG	100	4.074	8.568	-6.894	1.00	0.68	ACSY
	ATOM	1698	CA	ARG	100	4.120	8.684	-9.017	1.00	0.78	ACSY
	ATOM	1699	HA	ARG	100	3.668	9.464	-9.635	1.00	0.82	ACSY
	ATOM	1700	CB	ARG	100	5.516	8.332	-9.501	1.00	0.85	ACSY
	ATOM	1701	HB1	ARG	100	6.226	9.084	-9.154	1.00	0.88	ACSY
30	ATOM	1702	HB2	ARG	100	5.815	7.387	-9.055	1.00	0.83	ACSY
	ATOM	1703	CG	ARG	100	5.575	8.227	-11.026	1.00	0.95	ACSY
	ATOM	1704	HG1	ARG	100	6.477	7.692	-11.320	1.00	1.53	ACSY
	ATOM	1705	HG2	ARG	100	4.731	7.639	-11.386	1.00	1.34	ACSY
	ATOM	1706	CD	ARG	100	5.560	9.606	-11.684	1.00	1.59	ACSY
35	ATOM	1707	HD1	ARG	100	6.372	10.236	-11.317	1.00	2.22	ACSY
	ATOM	1708	HD2	ARG	100	4.617	10.123	-11.517	1.00	2.14	ACSY
	ATOM	1709	NE	ARG	100	5.724	9.481	-13.121	1.00	2.14	ACSY
	ATOM	1710	HE	ARG	100	5.797	8.581	-13.550	1.00	2.41	ACSY
	ATOM	1711	CZ	ARG	100	5.779	10.602	-13.865	1.00	2.96	ACSY

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	ATOM	1712	NH1	ARG	100	5.932	10.517	-15.184	1.00	3.73	ACSY
	ATOM	1713	HH11	ARG	100	6.007	9.621	-15.622	1.00	3.85	ACSY
	ATOM	1714	HH12	ARG	100	5.973	11.349	-15.737	1.00	4.41	ACSY
	ATOM	1715	NH2	ARG	100	5.680	11.794	-13.283	1.00	3.46	ACSY
5	ATOM	1716	HH21	ARG	100	5.565	11.859	-12.292	1.00	3.29	ACSY
	ATOM	1717	HH22	ARG	100	5.721	12.626	-13.837	1.00	4.28	ACSY
	ATOM	1718	C	ARG	100	3.227	7.440	-9.018	1.00	0.73	ACSY
	ATOM	1719	O	ARG	100	3.057	6.769	-8.008	1.00	0.66	ACSY
	ATOM	1720	N	VAL	101	2.672	7.184	-10.213	1.00	0.78	ACSY
10	ATOM	1721	HN	VAL	101	2.847	7.767	-10.997	1.00	0.84	ACSY
	ATOM	1722	CA	VAL	101	1.813	6.038	-10.359	1.00	0.76	ACSY
	ATOM	1723	HA	VAL	101	0.882	6.226	-9.800	1.00	0.71	ACSY
	ATOM	1724	CB	VAL	101	1.532	5.858	-11.835	1.00	0.85	ACSY
	ATOM	1725	HB	VAL	101	2.404	5.399	-12.291	1.00	0.90	ACSY
15	ATOM	1726	CG1	VAL	101	0.361	4.930	-12.035	1.00	0.85	ACSY
	ATOM	1727	HG11	VAL	101	0.680	3.892	-12.001	1.00	1.38	ACSY
	ATOM	1728	HG12	VAL	101	-0.384	5.078	-11.262	1.00	1.24	ACSY
	ATOM	1729	HG13	VAL	101	-0.100	5.115	-12.995	1.00	1.32	ACSY
	ATOM	1730	CG2	VAL	101	1.267	7.205	-12.512	1.00	0.90	ACSY
20	ATOM	1731	HG21	VAL	101	0.415	7.709	-12.054	1.00	1.41	ACSY
	ATOM	1732	HG22	VAL	101	2.133	7.861	-12.424	1.00	1.26	ACSY
	ATOM	1733	HG23	VAL	101	1.050	7.073	-13.572	1.00	1.35	ACSY
	ATOM	1734	C	VAL	101	2.523	4.786	-9.844	1.00	0.72	ACSY
	ATOM	1735	O	VAL	101	3.678	4.806	-9.439	1.00	0.72	ACSY
25	ATOM	1736	N	LEU	102	1.736	3.704	-9.902	1.00	0.71	ACSY
	ATOM	1737	HN	LEU	102	0.790	3.793	-10.196	1.00	0.73	ACSY
	ATOM	1738	CA	LEU	102	2.261	2.409	-9.513	1.00	0.70	ACSY
	ATOM	1739	HA	LEU	102	3.189	2.552	-8.950	1.00	0.67	ACSY
	ATOM	1740	CB	LEU	102	1.230	1.647	-8.706	1.00	0.66	ACSY
30	ATOM	1741	HB1	LEU	102	0.273	1.720	-9.199	1.00	0.71	ACSY
	ATOM	1742	HB2	LEU	102	1.490	0.595	-8.697	1.00	0.69	ACSY
	ATOM	1743	CG	LEU	102	1.116	2.153	-7.271	1.00	0.58	ACSY
	ATOM	1744	HG	LEU	102	1.965	1.780	-6.707	1.00	0.59	ACSY
	ATOM	1745	CD1	LEU	102	1.140	3.675	-7.208	1.00	0.59	ACSY
35	ATOM	1746	HD11	LEU	102	0.303	4.106	-7.759	1.00	1.18	ACSY
	ATOM	1747	HD12	LEU	102	1.073	4.007	-6.177	1.00	1.10	ACSY
	ATOM	1748	HD13	LEU	102	2.064	4.070	-7.622	1.00	1.22	ACSY
	ATOM	1749	CD2	LEU	102	-0.166	1.625	-6.634	1.00	0.58	ACSY
	ATOM	1750	HD21	LEU	102	-0.238	1.930	-5.591	1.00	1.16	ACSY

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	ATOM	1751	HD22	LEU	102	-1.043	2.004	-7.158	1.00	1.23	ACSY
	ATOM	1752	HD23	LEU	102	-0.199	0.539	-6.673	1.00	1.14	ACSY
	ATOM	1753	C	LEU	102	2.569	1.641	-10.778	1.00	0.81	ACSY
	ATOM	1754	O	LEU	102	2.100	1.957	-11.864	1.00	0.87	ACSY
5	ATOM	1755	N	THR	103	3.388	0.619	-10.562	1.00	0.83	ACSY
	ATOM	1756	HN	THR	103	3.745	0.435	-9.651	1.00	0.79	ACSY
	ATOM	1757	CA	THR	103	3.775	-0.181	-11.694	1.00	0.94	ACSY
	ATOM	1758	HA	THR	103	2.939	-0.178	-12.397	1.00	0.98	ACSY
	ATOM	1759	CB	THR	103	5.010	0.480	-12.307	1.00	1.01	ACSY
10	ATOM	1760	HB	THR	103	5.287	1.338	-11.699	1.00	0.96	ACSY
	ATOM	1761	OG1	THR	103	4.698	0.962	-13.589	1.00	1.08	ACSY
	ATOM	1762	HG1	THR	103	5.148	1.791	-13.686	1.00	1.35	ACSY
	ATOM	1763	CG2	THR	103	6.201	-0.464	-12.388	1.00	1.18	ACSY
	ATOM	1764	HG21	THR	103	5.989	-1.298	-13.052	1.00	1.35	ACSY
15	ATOM	1765	HG22	THR	103	7.081	0.055	-12.763	1.00	1.83	ACSY
	ATOM	1766	HG23	THR	103	6.438	-0.862	-11.402	1.00	1.58	ACSY
	ATOM	1767	C	THR	103	4.071	-1.619	-11.267	1.00	0.96	ACSY
	ATOM	1768	O	THR	103	3.769	-2.575	-11.971	1.00	1.04	ACSY
	ATOM	1769	N	VAL	104	4.679	-1.704	-10.072	1.00	0.88	ACSY
20	ATOM	1770	HN	VAL	104	4.859	-0.870	-9.533	1.00	0.82	ACSY
	ATOM	1771	CA	VAL	104	5.068	-3.036	-9.598	1.00	0.90	ACSY
	ATOM	1772	HA	VAL	104	4.447	-3.772	-10.109	1.00	0.98	ACSY
	ATOM	1773	CB	VAL	104	6.549	-3.223	-9.928	1.00	0.96	ACSY
	ATOM	1774	HB	VAL	104	7.089	-2.402	-9.443	1.00	0.92	ACSY
25	ATOM	1775	CG1	VAL	104	7.086	-4.541	-9.368	1.00	1.04	ACSY
	ATOM	1776	HG11	VAL	104	6.698	-5.390	-9.929	1.00	1.68	ACSY
	ATOM	1777	HG12	VAL	104	8.174	-4.572	-9.429	1.00	1.20	ACSY
	ATOM	1778	HG13	VAL	104	6.807	-4.667	-8.325	1.00	1.35	ACSY
	ATOM	1779	CG2	VAL	104	6.803	-3.172	-11.436	1.00	1.10	ACSY
30	ATOM	1780	HG21	VAL	104	5.895	-2.926	-11.978	1.00	1.53	ACSY
	ATOM	1781	HG22	VAL	104	7.559	-2.427	-11.681	1.00	1.38	ACSY
	ATOM	1782	HG23	VAL	104	7.156	-4.137	-11.800	1.00	1.64	ACSY
	ATOM	1783	C	VAL	104	4.929	-3.187	-8.087	1.00	0.76	ACSY
	ATOM	1784	O	VAL	104	5.117	-2.248	-7.333	1.00	0.65	ACSY
35	ATOM	1785	N	PRO	105	4.584	-4.441	-7.680	1.00	0.79	ACSY
	ATOM	1786	CD	PRO	105	4.141	-5.492	-8.580	1.00	0.94	ACSY
	ATOM	1787	HD1	PRO	105	4.956	-5.801	-9.229	1.00	1.00	ACSY
	ATOM	1788	HD2	PRO	105	3.323	-5.131	-9.202	1.00	1.01	ACSY
	ATOM	1789	CA	PRO	105	4.526	-4.805	-6.277	1.00	0.70	ACSY

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	ATOM	1790	HA	PRO	105	3.974	-4.055	-5.720	1.00	0.64	ACSY
	ATOM	1791	CB	PRO	105	3.848	-6.170	-6.222	1.00	0.82	ACSY
	ATOM	1792	HB1	PRO	105	4.435	-6.878	-5.639	1.00	0.81	ACSY
	ATOM	1793	HB2	PRO	105	2.887	-6.081	-5.741	1.00	0.86	ACSY
5	ATOM	1794	CG	PRO	105	3.684	-6.645	-7.676	1.00	0.97	ACSY
	ATOM	1795	HG1	PRO	105	4.286	-7.535	-7.858	1.00	1.02	ACSY
	ATOM	1796	HG2	PRO	105	2.644	-6.902	-7.880	1.00	1.06	ACSY
	ATOM	1797	C	PRO	105	5.959	-4.892	-5.745	1.00	0.65	ACSY
	ATOM	1798	O	PRO	105	6.827	-5.503	-6.355	1.00	0.71	ACSY
10	ATOM	1799	N	CYS	106	6.152	-4.263	-4.585	1.00	0.58	ACSY
	ATOM	1800	HN	CYS	106	5.383	-3.882	-4.072	1.00	0.57	ACSY
	ATOM	1801	CA	CYS	106	7.509	-4.211	-4.069	1.00	0.61	ACSY
	ATOM	1802	HA	CYS	106	8.176	-4.252	-4.931	1.00	0.64	ACSY
	ATOM	1803	CB	CYS	106	7.712	-2.909	-3.322	1.00	0.74	ACSY
15	ATOM	1804	HB1	CYS	106	7.750	-2.086	-4.022	1.00	1.16	ACSY
	ATOM	1805	HB2	CYS	106	6.872	-2.721	-2.665	1.00	0.97	ACSY
	ATOM	1806	SG	CYS	106	9.228	-2.923	-2.337	1.00	1.05	ACSY
	ATOM	1807	HG	CYS	106	8.949	-2.555	-1.085	1.00	1.70	ACSY
	ATOM	1808	C	CYS	106	7.846	-5.370	-3.154	1.00	0.66	ACSY
20	ATOM	1809	O	CYS	106	8.734	-6.167	-3.429	1.00	0.80	ACSY
	ATOM	1810	N	GLN	107	7.109	-5.378	-2.035	1.00	0.66	ACSY
	ATOM	1811	HN	GLN	107	6.392	-4.706	-1.893	1.00	0.68	ACSY
	ATOM	1812	CA	GLN	107	7.354	-6.380	-1.035	1.00	0.77	ACSY
	ATOM	1813	HA	GLN	107	8.163	-6.001	-0.405	1.00	0.87	ACSY
25	ATOM	1814	CB	GLN	107	6.118	-6.573	-0.207	1.00	0.88	ACSY
	ATOM	1815	HB1	GLN	107	5.433	-5.770	-0.402	1.00	0.88	ACSY
	ATOM	1816	HB2	GLN	107	5.627	-7.483	-0.508	1.00	0.93	ACSY
	ATOM	1817	CG	GLN	107	6.448	-6.608	1.278	1.00	1.08	ACSY
	ATOM	1818	HG1	GLN	107	7.149	-5.810	1.520	1.00	1.10	ACSY
30	ATOM	1819	HG2	GLN	107	5.555	-6.456	1.869	1.00	1.31	ACSY
	ATOM	1820	CD	GLN	107	7.062	-7.954	1.664	1.00	1.41	ACSY
	ATOM	1821	OE1	GLN	107	6.721	-8.999	1.125	1.00	2.03	ACSY
	ATOM	1822	NE2	GLN	107	7.988	-7.852	2.634	1.00	1.85	ACSY
	ATOM	1823	HE21	GLN	107	8.215	-6.962	3.030	1.00	2.21	ACSY
35	ATOM	1824	HE22	GLN	107	8.463	-8.663	2.974	1.00	2.23	ACSY
	ATOM	1825	C	GLN	107	7.794	-7.697	-1.634	1.00	0.83	ACSY
	ATOM	1826	O	GLN	107	7.599	-8.015	-2.801	1.00	0.90	ACSY
	ATOM	1827	N	LYS	108	8.369	-8.437	-0.701	1.00	0.89	ACSY
	ATOM	1828	HN	LYS	108	8.418	-8.089	0.238	1.00	0.91	ACSY

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	ATOM	1829	CA	LYS	108	8.908	-9.729	-1.026	1.00	1.00	ACSY
	ATOM	1830	HA	LYS	108	9.706	-9.569	-1.756	1.00	1.10	ACSY
	ATOM	1831	CB	LYS	108	9.468	-10.322	0.245	1.00	0.99	ACSY
	ATOM	1832	HB1	LYS	108	8.818	-10.086	1.087	1.00	1.06	ACSY
5	ATOM	1833	HB2	LYS	108	9.512	-11.409	0.166	1.00	1.62	ACSY
	ATOM	1834	CG	LYS	108	10.850	-9.764	0.480	1.00	1.43	ACSY
	ATOM	1835	HG1	LYS	108	11.522	-10.228	-0.226	1.00	2.09	ACSY
	ATOM	1836	HG2	LYS	108	10.853	-8.697	0.259	1.00	1.80	ACSY
	ATOM	1837	CD	LYS	108	11.331	-9.989	1.909	1.00	1.58	ACSY
10	ATOM	1838	HD1	LYS	108	12.248	-9.422	2.074	1.00	1.75	ACSY
	ATOM	1839	HD2	LYS	108	10.590	-9.596	2.606	1.00	1.59	ACSY
	ATOM	1840	CE	LYS	108	11.581	-11.470	2.199	1.00	1.99	ACSY
	ATOM	1841	HE1	LYS	108	11.877	-11.611	3.238	1.00	2.24	ACSY
	ATOM	1842	HE2	LYS	108	10.675	-12.052	2.030	1.00	2.32	ACSY
15	ATOM	1843	NZ	LYS	108	12.633	-12.031	1.359	1.00	2.54	ACSY
	ATOM	1844	HZ1	LYS	108	12.315	-12.047	0.369	1.00	2.99	ACSY
	ATOM	1845	HZ2	LYS	108	13.489	-11.446	1.439	1.00	2.75	ACSY
	ATOM	1846	HZ3	LYS	108	12.845	-13.000	1.672	1.00	2.98	ACSY
	ATOM	1847	C	LYS	108	7.874	-10.654	-1.631	1.00	1.21	ACSY
20	ATOM	1848	O	LYS	108	6.720	-10.310	-1.854	1.00	1.28	ACSY
	ATOM	1849	N	ILE	109	8.401	-11.863	-1.875	1.00	1.48	ACSY
	ATOM	1850	HN	ILE	109	9.363	-12.046	-1.647	1.00	1.55	ACSY
	ATOM	1851	CA	ILE	109	7.566	-12.890	-2.464	1.00	1.78	ACSY
	ATOM	1852	HA	ILE	109	6.748	-12.385	-2.982	1.00	1.89	ACSY
25	ATOM	1853	CB	ILE	109	8.394	-13.727	-3.439	1.00	2.08	ACSY
	ATOM	1854	HB	ILE	109	9.120	-14.307	-2.865	1.00	2.22	ACSY
	ATOM	1855	CG2	ILE	109	7.495	-14.698	-4.206	1.00	2.57	ACSY
	ATOM	1856	HG21	ILE	109	6.458	-14.363	-4.189	1.00	2.80	ACSY
	ATOM	1857	HG22	ILE	109	7.535	-15.697	-3.774	1.00	2.99	ACSY
30	ATOM	1858	HG23	ILE	109	7.807	-14.772	-5.248	1.00	3.08	ACSY
	ATOM	1859	CG1	ILE	109	9.151	-12.856	-4.423	1.00	2.79	ACSY
	ATOM	1860	HG11	ILE	109	9.511	-13.493	-5.221	1.00	3.11	ACSY
	ATOM	1861	HG12	ILE	109	8.476	-12.128	-4.874	1.00	3.35	ACSY
	ATOM	1862	CD1	ILE	109	10.333	-12.138	-3.768	1.00	3.27	ACSY
35	ATOM	1863	HD11	ILE	109	10.720	-12.713	-2.927	1.00	3.76	ACSY
	ATOM	1864	HD12	ILE	109	11.144	-11.997	-4.482	1.00	3.43	ACSY
	ATOM	1865	HD13	ILE	109	10.038	-11.156	-3.399	1.00	3.61	ACSY
	ATOM	1866	C	ILE	109	6.992	-13.779	-1.358	1.00	1.95	ACSY
	ATOM	1867	O	ILE	109	6.314	-13.325	-0.445	1.00	2.27	ACSY

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	ATOM	1868	N	GLY	110	7.318	-15.075	-1.515	1.00	2.16	ACSY
	ATOM	1869	HN	GLY	110	7.881	-15.361	-2.302	1.00	2.31	ACSY
	ATOM	1870	CA	GLY	110	6.846	-16.042	-0.543	1.00	2.55	ACSY
	ATOM	1871	HA1	GLY	110	6.075	-16.645	-1.024	1.00	2.98	ACSY
5	ATOM	1872	HA2	GLY	110	6.405	-15.489	0.286	1.00	2.78	ACSY
	ATOM	1873	C	GLY	110	7.992	-16.927	-0.050	1.00	2.95	ACSY
	ATOM	1874	O	GLY	110	8.812	-16.529	0.768	1.00	3.24	ACSY
	ATOM	1875	N	THR	111	7.988	-18.152	-0.608	1.00	3.69	ACSY
	ATOM	1876	HN	THR	111	7.275	-18.429	-1.240	1.00	3.93	ACSY
10	ATOM	1877	CA	THR	111	9.006	-19.093	-0.237	1.00	4.59	ACSY
	ATOM	1878	HA	THR	111	9.294	-18.873	0.792	1.00	4.56	ACSY
	ATOM	1879	CB	THR	111	8.406	-20.497	-0.351	1.00	5.48	ACSY
	ATOM	1880	HB	THR	111	8.823	-21.017	-1.202	1.00	5.47	ACSY
	ATOM	1881	OG1	THR	111	7.016	-20.413	-0.568	1.00	6.29	ACSY
15	ATOM	1882	HG1	THR	111	6.733	-19.585	-0.204	1.00	6.55	ACSY
	ATOM	1883	CG2	THR	111	8.659	-21.301	0.902	1.00	6.06	ACSY
	ATOM	1884	HG21	THR	111	9.727	-21.403	1.081	1.00	6.29	ACSY
	ATOM	1885	HG22	THR	111	8.229	-22.295	0.812	1.00	6.36	ACSY
	ATOM	1886	HG23	THR	111	8.213	-20.810	1.765	1.00	6.33	ACSY
20	ATOM	1887	C	THR	111	10.223	-18.920	-1.152	1.00	5.25	ACSY
	ATOM	1888	O	THR	111	11.188	-18.242	-0.821	1.00	5.77	ACSY
	ATOM	1889	N	GLN	112	10.106	-19.575	-2.315	1.00	5.59	ACSY
	ATOM	1890	HN	GLN	112	9.300	-20.129	-2.502	1.00	5.45	ACSY
	ATOM	1891	HA	GLN	112	12.023	-19.036	-2.761	1.00	6.65	ACSY
25	ATOM	1892	CB	GLN	112	11.526	-20.900	-3.757	1.00	7.76	ACSY
	ATOM	1893	HB1	GLN	112	10.613	-21.428	-4.033	1.00	7.73	ACSY
	ATOM	1894	HB2	GLN	112	12.131	-20.835	-4.654	1.00	8.48	ACSY
	ATOM	1895	CG	GLN	112	12.273	-21.693	-2.685	1.00	8.32	ACSY
	ATOM	1896	HG1	GLN	112	11.671	-21.777	-1.780	1.00	8.37	ACSY
30	ATOM	1897	HG2	GLN	112	13.206	-21.195	-2.418	1.00	8.00	ACSY
	ATOM	1898	CD	GLN	112	12.590	-23.098	-3.202	1.00	9.59	ACSY
	ATOM	1899	OE1	GLN	112	12.590	-23.363	-4.398	1.00	10.22	ACSY
	ATOM	1900	NE2	GLN	112	12.859	-23.973	-2.216	1.00	10.08	ACSY
	ATOM	1901	HE21	GLN	112	12.840	-23.684	-1.259	1.00	9.69	ACSY
35	ATOM	1902	HE22	GLN	112	13.081	-24.925	-2.425	1.00	10.94	ACSY
	ATOM	1903	C	GLN	112	10.750	-18.616	-4.449	1.00	6.55	ACSY
	ATOM	1904	OCT1	GLN	112	10.566	-19.149	-5.543	1.00	6.59	ACSY
	ATOM	1905	OCT2	GLN	112	10.606	-17.410	-4.259	1.00	6.79	ACSY
	ATOM	1906	CA	GLN	112	11.179	-19.495	-3.273	1.00	6.56	ACSY

END

*Note: See copyright notice on page 1.

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- 5 (i) APPLICANT: ARIAD PHARMACEUTICALS, INC.
- (ii) TITLE OF INVENTION: CRYSTALLINE ZAP-FAMILY PROTEINS
- (iii) NUMBER OF SEQUENCES: 25
- 10 (iv) CORRESPONDENCE ADDRESS:
- (A) ADDRESSEE: David L. Bernstein,
ARIAD Pharmaceuticals, Inc.
- (B) STREET: 26 Landsdowne Street
- 15 (C) CITY: Cambridge
- (D) STATE: Massachusetts
- (E) COUNTRY: USA
- (F) ZIP: 02139-4234
- 20 (v) COMPUTER READABLE FORM:
- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
- 25 (vi) CURRENT APPLICATION DATA:
- (A) APPLICATION NUMBER: PCT/US96/13918
- (B) FILING DATE: 30-AUG-1996
- (C) CLASSIFICATION:
- 30 (vii) PRIOR APPLICATION DATA:
- (A) APPLICATION NUMBER: US 60/002,972
- (B) FILING DATE: 30-AUG-1995
- 35 (viii) PRIOR APPLICATION DATA:
- (A) APPLICATION NUMBER: US 60/003,312
- (B) FILING DATE: 06-SEP-1995
- (viii) ATTORNEY/AGENT INFORMATION:

- (A) NAME: BERSTEIN, David L.
- (B) REGISTRATION NUMBER: 31,235
- (C) REFERENCE/DOCKET NUMBER: 347C-PCT

5 (ix) TELECOMMUNICATION INFORMATION:

- (A) TELEPHONE: 617-494-0400
- (B) TELEFAX: 617-494-0208

(2) INFORMATION FOR SEQ ID NO:1:

10

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

15

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

20

Tyr Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Tyr Xaa Xaa Leu
1 5 10 15

(2) INFORMATION FOR SEQ ID NO:2:

25

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

30

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

35

- (A) NAME/KEY: Modified-site
- (B) LOCATION: 1
- (D) OTHER INFORMATION: /product= "Acetylated"

/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "phosphotyrosine"

5 /label= pTyr

/note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

10 (B) LOCATION: 15

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

/note= "phosphorylated tyrosine"

15 (ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 19

(D) OTHER INFORMATION: /product= "amidated"

/label= NH2

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Asp Gly Val Tyr Thr Gly Leu Ser Thr Arg Asn Gln Glu Thr Tyr

1

5

10

15

25

Glu Thr Leu Lys

(2) INFORMATION FOR SEQ ID NO:3:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

35

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 1
(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

5

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 1
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

10

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 12
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

15

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 15
(D) OTHER INFORMATION: /product= "amidated"
/label= NH2

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

25

Tyr	Thr	Gly	Leu	Ser	Thr	Arg	Asn	Gln	Glu	Thr	Tyr	Glu	Thr	Leu
1				5					10					15

30

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 25 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 1
5 (D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
10 (B) LOCATION: 4
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated"

15 (ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 15
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
20 /note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Asp Gly Val Tyr Thr Gly Leu Ser Thr Arg Asn Gln Glu Thr Tyr Glu
25 1 5 10 15

Thr Leu Lys His Glu Lys Pro Pro Gln
20 25

30 (2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 amino acids
(B) TYPE: amino acid
35 (C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"

5 /label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 6

10 (D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

/note= "phosphorylated tyrosine"

(ix) FEATURE:

15 (A) NAME/KEY: Modified-site

(B) LOCATION: 17

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

/note= "phosphorylated tyrosine"

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Lys Ser Asp Gly Val Tyr Thr Gly Leu Ser Thr Arg Asn Gln Glu Thr

1 5 10 15

25

Tyr Glu Thr Leu Lys His Glu Lys Pro Pro Gln

20 25

(2) INFORMATION FOR SEQ ID NO:6:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

35

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 1
(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

5

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 4
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

10

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 15
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

15

(ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 19
(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
1 5 10 15

25

Val Leu Asp

30

(2) INFORMATION FOR SEQ ID NO:7:

35

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

5 (ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"

/label= Ac

10

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 3

(D) OTHER INFORMATION: /product= "phosphotyrosine"

15 /label= pTyr

/note= "phosphorylated"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

20

(B) LOCATION: 11

(D) OTHER INFORMATION: /product= "Norleucine"

/label= Nle

(ix) FEATURE:

25

(A) NAME/KEY: Modified-site

(B) LOCATION: 15

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

/note= "phosphorylated"

30

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 19

(D) OTHER INFORMATION: /product= "Amidated"

35

/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Gly Leu Tyr Asn Glu Leu Gln Lys Asp Lys Xaa Ala Glu Ala Tyr Ser
1 5 10 15

Glu Ile Gly

5

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- 10 (A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

- 15 (ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 1
20 (D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
25 (B) LOCATION: 4
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

30 (ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 15
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
35 /note= "phosphorylated tyrosine"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 19

(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

5

Asp Gly Leu Tyr Gln Gly Leu Ser Thr Ala Thr Lys Asp Thr Tyr Asp
1 5 10 15

Ala Leu His

10

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

15

- (A) LENGTH: 16 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
 - (B) LOCATION: 1
 - (D) OTHER INFORMATION: /product= "Acetylated"
- 25 /label= Ac

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
 - (B) LOCATION: 1
 - (D) OTHER INFORMATION: /product= "phosphotyrosine"
- 30 /label= pTyr
/note= "phosphorylated tyrosine"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
 - (B) LOCATION: 3
 - (D) OTHER INFORMATION: /product= p-Iodo-L-
Phenylalanine"
- 35 /label= pI-Phe

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 12

5 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

(ix) FEATURE:

10 (A) NAME/KEY: Modified-site

(B) LOCATION: 16

(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Asn Gln Xaa Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
1 5 10 15

20 Val Leu Asp

(2) INFORMATION FOR SEQ ID NO:10:

25 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

30

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

35 (B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "difluorophosphono methyl
phenylalanine"

5 /label= F2Pmp

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 15

10 (D) OTHER INFORMATION: /product= "difluorophosphono methyl
phenylalanine"

/label= F2Pmp

(ix) FEATURE:

15 (A) NAME/KEY: Modified-site

(B) LOCATION: 19

(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Asn Gln Leu Phe Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Phe Asp
1 5 10 15

25 Val Leu Asp

(2) INFORMATION FOR SEQ ID NO:11:

30 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 16 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"

/label= Ac

5 (ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

10 /note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 12

15 (D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

/note= "phosphorylated tyrosine"

(ix) FEATURE:

20 (A) NAME/KEY: Modified-site

(B) LOCATION: 16

(D) OTHER INFORMATION: /product= "Amidated"

/label= NH2

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Asp Gly Val Tyr Thr Gly Leu Ala Ala Ala Tyr Glu Thr Leu Lys

1

5

10

15

30 (2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4 amino acids

(B) TYPE: amino acid

35 (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "phosphotyrosine"

5 /label= pTyr.

/note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

10 Tyr Xaa Xaa Leu

1

(2) INFORMATION FOR SEQ ID NO:13:

15 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

20

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

25 (B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"

/label= Ac

(ix) FEATURE:

30 (A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

/note= "phosphorylated tyrosine"

35

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 3

(D) OTHER INFORMATION: /product= "N-methyl glycine"

/label= nmGly

(ix) FEATURE:

- 5 (A) NAME/KEY: Modified-site
(B) LOCATION: 4
(D) OTHER INFORMATION: /product= "N-methyl leucine"

/label= nmLeu

(ix) FEATURE:

- 10 (A) NAME/KEY: Modified-site
(B) LOCATION: 4
(D) OTHER INFORMATION: /product= "Amidated"

/label= NH2

- 15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Tyr Thr Gly Leu

1

- 20 (2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- 25 (A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

- 30 (ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 4
(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= pTyr

- 35 /note= "phosphorylated tyrosine"

(ix) FEATURE:

- (A) NAME/KEY: Modified-site
(B) LOCATION: 15

(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= pTyr
/note= "phosphorylated tyrosine"

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
1 5 10 15

10 Val Leu Asp

(2) INFORMATION FOR SEQ ID NO:15:

15 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: peptide

(ix) FEATURE:
(A) NAME/KEY: Modified-site
25 (B) LOCATION: 4
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
/note= "phosphorylated tyrosine"

30 (ix) FEATURE:
(A) NAME/KEY: Modified-site
(B) LOCATION: 15
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
35 /note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp

1

5

10

15

Val Leu Asp

5

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 amino acids

10

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

15

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"

20

/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 7

25

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

/note= "phosphorylated tyrosine"

(ix) FEATURE:

30

(A) NAME/KEY: Modified-site

(B) LOCATION: 18

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

/note= "phosphorylated tyrosine"

35

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 22

(D) OTHER INFORMATION: /product= "Amidated"

/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

5 Lys Gly Gly Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
 1 5 10 15

 Glu Tyr Asp Val Leu Asp
 20

10

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

15 (A) LENGTH: 19 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

20

(ix) FEATURE:

 (A) NAME/KEY: Modified-site
 (B) LOCATION: 15
 (D) OTHER INFORMATION: /product= "phosphotyrosine"

25 /label= TyrPO4
 /note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

30 Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu Glu Tyr Asp
 1 5 10 15

 Val Leu Asp

35

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 22 amino acids

(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

5 (ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 1

10 (D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 18

15 (D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
/note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 22
(D) OTHER INFORMATION: /product= "Amidated"

20 /label= NH2

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Lys Gly Gly Asn Gln Leu Tyr Asn Glu Leu Asn Leu Gly Arg Arg Glu
1 5 10 15

30

Glu Tyr Asp Val Leu Asp
20

(2) INFORMATION FOR SEQ ID NO:19:

35

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

5 (ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 4

(D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

10 /note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 15

15 (D) OTHER INFORMATION: /product= "phosphotyrosine"

/label= TyrPO4

/note= "phosphorylated tyrosine"

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

20

Asp Gly Val Tyr Thr Gly Leu Ser Thr Arg Asn Gln Glu Thr Tyr Glu

1

5

10

15

Thr Leu Lys

25

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

30

(A) LENGTH: 22 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(A) NAME/KEY: Modified-site

(B) LOCATION: 1

(D) OTHER INFORMATION: /product= "Acetylated"
/label= Ac

(ix) FEATURE:

5 (A) NAME/KEY: Modified-site
(B) LOCATION: 7
(D) OTHER INFORMATION: /product= "phosphotyrosine"
/label= TyrPO4
/note= "phosphorylated tyrosine"

10

(ix) FEATURE:

(A) NAME/KEY: Modified-site
(B) LOCATION: 18
(D) OTHER INFORMATION: /product= "phosphotyrosine"
15 /label= TyrPO4
/note= "phosphorylated tyrosine"

(ix) FEATURE:

(A) NAME/KEY: Modified-site
20 (B) LOCATION: 22
(D) OTHER INFORMATION: /product= "Amidated"
/label= NH2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

25

Cys Gly Gly Asp Gly Val Tyr Thr Gly Leu Ser Thr Arg Asn Gln Glu
1 5 10 15

Thr Tyr Glu Thr Leu Lys

30

20

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

35 (A) LENGTH: 98 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

5 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Trp Tyr Phe Gly Lys Ile Thr Arg Arg Glu Ser Glu Arg Leu Leu Leu
1 5 10 15

10 Asn Pro Glu Asn Pro Arg Gly Thr Phe Leu Val Arg Glu Ser Glu Thr
 20 25 30

Thr Lys Gly Ala Tyr Cys Leu Ser Val Ser Asp Phe Asp Asn Ala Lys
 35 40 45

15 Gly Leu Asn Val Lys His Tyr Lys Ile Arg Lys Leu Asp Ser Gly Gly
 50 55 60

20 Phe Tyr Ile Thr Ser Arg Thr Gln Phe Asn Ser Leu Gln Gln Leu Val
65 70 75 80

Ala Tyr Tyr Ser Lys His Ala Asp Gly Leu Cys His Arg Leu Thr Thr
 85 90 95

25 Val Cys

(2) INFORMATION FOR SEQ ID NO:22:

30 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 98 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

35

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

5 Trp Phe Phe Lys Asn Leu Ser Arg Lys Asp Ala Glu Arg Gln Leu Leu
 1 5 10 15
 Ala Pro Gly Asn Thr His Gly Ser Phe Leu Ile Arg Glu Ser Glu Ser
 20 25 30
 10 Thr Ala Gly Ser Phe Ser Leu Ser Val Arg Asp Phe Asp Gln Asn Gln
 35 40 45
 Gly Glu Val Val Lys His Tyr Lys Ile Arg Asn Leu Asp Asn Gly Gly
 50 55 60
 15 Phe Tyr Ile Ser Pro Arg Ile Thr Phe Pro Gly Leu His Glu Leu Val
 65 70 75 80
 Arg His Tyr Thr Asn Ala Ser Asp Gly Leu Cys Thr Arg Leu Ser Arg
 85 90 95
 20 Pro Cys

(2) INFORMATION FOR SEQ ID NO:23:

25

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 97 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

30

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

Trp Phe His Pro Asn Ile Thr Gly Val Glu Ala Glu Asn Leu Leu Leu
 1 5 10 15

Thr Arg Gly Val Asp Gly Ser Phe Leu Ala Arg Pro Ser Lys Ser Asn
 20 25 30
 5 Pro Gly Asp Phe Thr Leu Ser Val Arg Arg Asn Gly Ala Val Thr His
 35 40 45
 Ile Lys Ile Gln Asn Thr Gly Asp Tyr Tyr Asp Leu Tyr Gly Gly Glu
 50 55 60
 10 Lys Phe Ala Thr Leu Ala Glu Leu Val Gln Tyr Tyr Met Glu His His
 65 70 75 80
 Gly Gln Leu Lys Glu Lys Asn Gly Asp Val Ile Glu Leu Lys Tyr Pro
 15 85 90 95
 Leu

20 (2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 93 amino acids
 (B) TYPE: amino acid
 25 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

30 (v) FRAGMENT TYPE: internal

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Phe Phe Tyr Gly Ser Ile Ser Arg Ala Glu Ala Glu Glu His Leu Lys
 35 1 5 10 15
 Leu Ala Gly Met Ala Asp Gly Leu Phe Leu Leu Arg Gln Cys Leu Arg
 20 25 30

Ser Leu Gly Gly Tyr Val Leu Ser Leu Val His Asp Val Arg Phe His
 35 40 45

His Phe Pro Ile Glu Arg Gln Leu Asn Gly Thr Tyr Ala Ile Ala Gly
 5 50 55 60

Gly Lys Ala His Cys Gly Pro Ala Glu Leu Cys Glu Phe Tyr Ser Arg
 65 70 75 80

Asp Pro Asp Gly Leu Pro Cys Asn Leu Arg Lys Pro Cys
 85 90

(2) INFORMATION FOR SEQ ID NO:25:

15 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 92 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

20 (ii) MOLECULE TYPE: protein

(v) FRAGMENT TYPE: internal

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

Trp Tyr His Ser Ser Leu Thr Arg Glu Glu Ala Glu Arg Lys Leu Tyr
 1 5 10 15

Ser Gly Ala Gln Thr Asp Gly Lys Phe Leu Leu Arg Pro Arg Lys Glu
 20 25 30

Gln Gly Thr Tyr Ala Leu Ser Leu Ile Tyr Gly Lys Thr Val Tyr His
 35 40 45

Tyr Leu Ile Ser Gln Asp Lys Ala Gly Lys Tyr Cys Ile Pro Glu Gly
 50 55 60

Thr Lys Phe Asp Thr Leu Trp Gln Leu Val Glu Tyr Leu Lys Leu Lys

65

70

75

80

Ala Asp Gly Leu Ile Tyr Cys Leu Lys Glu Ala Cys

85

90

Claims

1. A composition comprising a protein in crystalline form containing a peptide sequence comprising a tandem SH2 region of a ZAP family protein or a portion thereof.
2. A composition of claim 1 which further comprises one or more heavy metal atoms.
3. A composition of claim 1 wherein the protein comprises a region characterized by the coordinates of Appendix I, Appendix II, Appendix III, or Appendix IV, or coordinates having a root mean square deviation therefrom, with respect to backbone atoms of the listed amino acids, of not more than 1.5 Å.
4. A composition of claim 1 in which the protein is in a complex with one or more ligand molecules.
5. A composition of claim 1 in which the protein comprises the tandem SH2 region of human ZAP-70 (spanning at least amino acid residues 3 through 279) or the tandem SH2 region of human SYK (spanning at least amino acid residues 6 through 265).
6. A composition of any of claims 1-5 which diffracts x-rays to a resolution of greater than about 3.5 Å.
7. A method for determining the three-dimensional structure of a protein containing an SH2 domain, or a co-complex of the protein with a ligand therefor, which comprises
 - (a) obtaining x-ray diffraction data for crystals of the protein or co-complex,
 - (b) providing three-dimensional structural coordinates for a composition of any of claims 1-6, and
 - (c) determining the three-dimensional structure of the SH2 domain-containing protein or co-complex by analyzing the x-ray diffraction data with reference to the previous structural coordinates using molecular replacement.
8. A method of claim 7 wherein the protein is a co-complex of ZAP-NC, or a portion thereof, with a ligand other than the ζ 1 peptide.
9. A method of claim 7 wherein the protein is a co-complex of SYK-NC, or a portion thereof, with a ligand therefor.

10. A method for determining the three dimensional structure of a protein containing an SH2 domain or co-complex of said protein with a ligand therefor, which method comprises:

- 5 (a) providing structural coordinates for a composition of any of claims 1-6, and
- (b) determining the three-dimensional structure of the SH2 domain-containing protein or co-complex by homology modeling with reference to the previous structural coordinates.

10

11. A method for selecting a compound capable of binding to a ZAP family protein which comprises:

- 15 (a) providing coordinates defining the three dimensional structure of a ZAP family protein or a portion thereof;
- (b) characterizing points associated with that three dimensional structure with respect to the favorability of interactions with one or more selected functional groups;
- 20 (c) providing a database of one or more candidate compounds; and
- (d) identifying from the database those compounds having structures which best fit the points of favorable interaction with the three dimensional structure.

25 12. A method of claim 11 which further comprises testing a compound so identified for its ability to:

- (a) bind to a ZAP family protein,
- 30 (b) inhibit the binding of a ZAP family protein to a natural or non-natural ligand therefor, and/or
- (c) inhibit a biological function mediated by a ZAP family member.

35 13. A machine-readable data storage medium, comprising a data storage material encoded with machine readable data which, when using a machine programmed with instructions for using said data, is capable of displaying a graphical three-dimensional representation of a molecule or molecular complex comprising a protein of any of claims 1-6, or a portion thereof.

- 1 4. A machine-readable data storage medium, comprising a data storage material encoded
with machine readable data which, when using a machine programmed with instructions for
using said data, is capable of displaying a graphical three-dimensional representation of a ZAP
5 family protein or ZAP family protein:ligand complex or portion thereof based on the coordinates
of Appendix I, Appendix II, or Appendix III, or based on coordinates having a root mean square
deviation therefrom with respect to conserved protein backbone atoms of not more than 1.5 Å.
- 1 0 15. A machine-readable data storage medium comprising a data storage material encoded
with a first set of machine readable data which, when combined with a second set of machine-
readable data, using a machine programmed with instructions for using said first set of data and
said second set of data, can determine at least a portion of the coordinates corresponding to the
second set of machine-readable data, wherein: said first set of data comprises a Fourier
transform of at least a portion of the coordinates according to Appendix I, Appendix II,
1 5 Appendix III or Appendix IV; and said second set of data comprises an X-ray diffraction pattern
of a molecule or molecular complex.
16. A method for displaying a three dimensional representation of a composition of any of
claims 1-6 which comprises:
- 2 0 (a) providing a machine capable of reading data stored on a machine-readable storage
medium of claim 13, programmed with instructions for using said data to display a
graphical three-dimensional representation of a protein or protein:ligand complex or
portion thereof defined by said data, and loaded with a machine-readable storage medium
of claim 13; and,
- 2 5 (b) permitting the machine to read said data and display the three-dimensional
representation.
17. A method for designing a compound capable of binding to a ZAP family protein that
comprises:
- 3 0 (a) graphically displaying a three-dimensional representation based on coordinates
defining the three-dimensional structure of a ZAP family protein or a portion thereof;
- 3 5 (b) characterizing the interactions between portions of a ligand that is known to bind
to the protein to identify candidate moieties for replacement;
- (c) providing a knowledge base of one or more candidate substitute moieties; and

(d) identifying from the knowledge base one or more substitute moieties which may be used to replace one or more selected portions of the ligand and retain at least a portion of the ligand's binding affinity for the protein.

5 18. A method for designing a compound capable of binding to a ZAP family protein that comprises:

(a) providing coordinates defining the three-dimensional structure of a ZAP family protein or a portion thereof;

10

(b) characterizing points associated with that three-dimensional structure to identify preferred points with respect to the favorability of interactions of one or more selected functional groups with the protein;

15

(c) characterizing one or more portions of a ligand that is known to bind to the protein that are proximal to the characterized points;

(d) providing a knowledge base of one or more molecular fragments or molecules;

20

(e) identifying from the knowledge base one or more fragments or molecules that permit connection of preferred points identified in (b) to portions of the ligand; and

(f) modifying the structure of the ligand by the covalent attachment thereto of one or more such fragments or molecules so identified in an orientation and location selected to permit the modified ligand to bind to the protein.

25

19. A method for determining the orientation of a ligand bound to a ZAP family protein that comprises:

30

(a) providing coordinates defining the three-dimensional structure of a ZAP family protein or a portion thereof;

(b) characterizing points associated with that three-dimensional structure to identify preferred points with respect to the favorability of interactions of one or more selected functional groups with the protein;

35

(c) anchoring one or more functional groups of a ligand known to bind to the protein, the bound conformation of the ligand being unknown, at selected sites consistent with the preferred points of functional group interaction identified in (b); and,

(d) performing modeling calculations to generate a series of alternative conformations and/or orientations for the anchored ligand.

5 20. A method for designing a compound capable of binding to a ZAP family protein that comprises:

(a) selecting a protein:ligand conformation and/or orientation identified by the method of claim 19;

10

(b) characterizing the interactions between portions of the ligand and the protein to identify candidate moieties of the ligand for replacement;

(c) providing a knowledge base of one or more candidate substitute moieties; and

15

(d) identifying from the knowledge base one or more substitute moieties which may be used to replace one or more selected portions of the ligand and retain at least a portion of the ligand's binding affinity for the protein.

20 21. A method for designing a compound capable of binding to a ZAP family protein that comprises:

(a) selecting a protein:ligand conformation and/or orientation identified by the method of claim 19;

25

(b) characterizing points associated with the three-dimensional structure of the protein to identify preferred points with respect to the favorability of interactions of one or more selected functional groups with the protein;

30 (c) characterizing one or more portions of a ligand that is known to bind to the protein that are proximal to the characterized points;

(d) providing a knowledge base of one or more molecular fragments or molecules;

35 (e) identifying from the knowledge base one or more fragments or molecules that permit connection of preferred points identified in (b) to portions of the ligand; and

(f) modifying the structure of the ligand by the covalent attachment thereto of one or more such fragments or molecules so identified in an orientation and location selected to permit the modified ligand to bind to the protein.

- 5 22. A method for selecting or designing a compound capable of binding to a ZAP family protein that comprises any combination of steps as described in claims 17-21.



Fig 1A

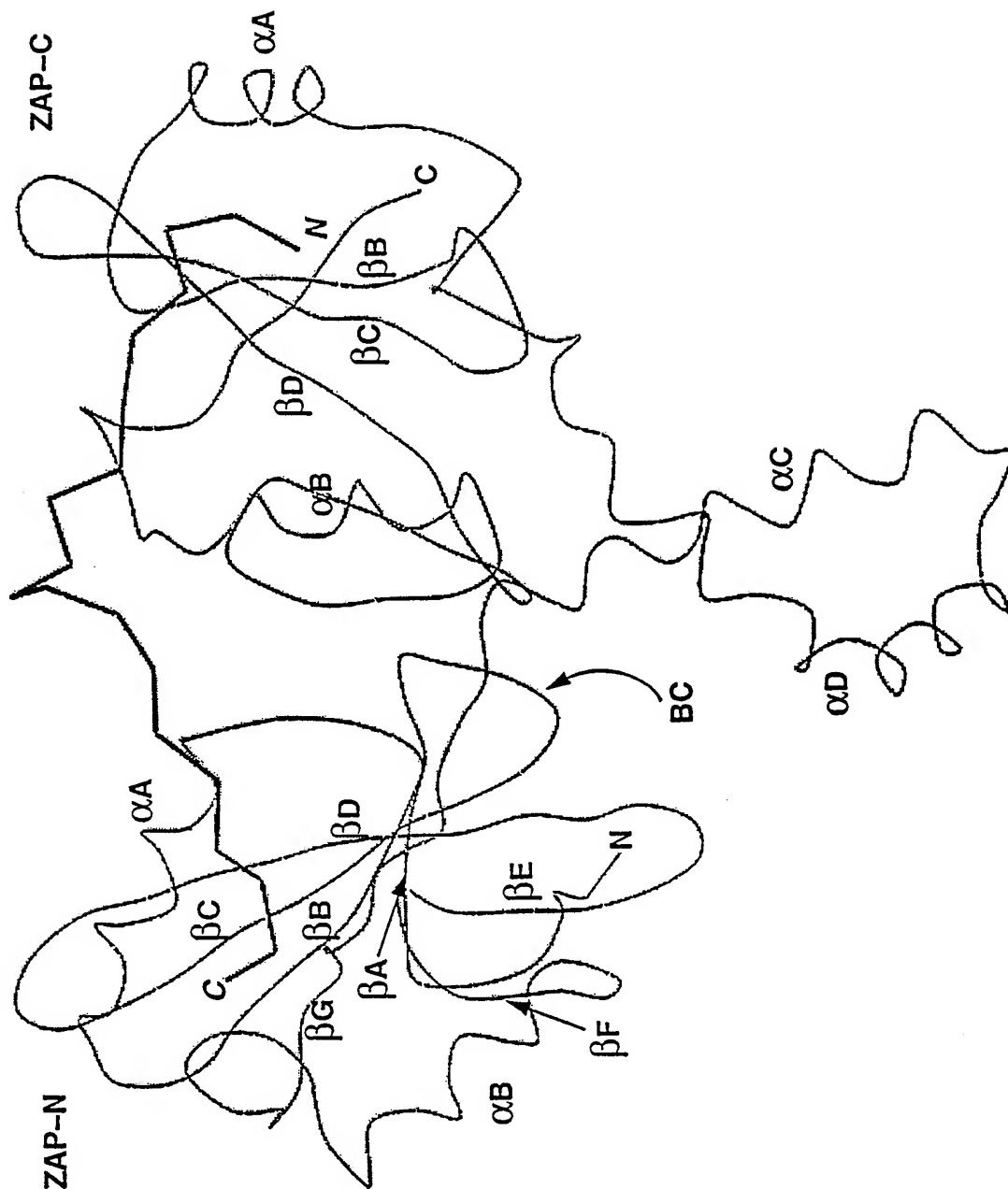


Fig 1B

Src	WYF GKI TRRESERLLL NPE	N	PRG TFLVRES ET	T	KG AYCLSVSD	FDNAKGL
Lck	WFF KNL SRKDAERQLL APG	N	THG SFLIRES ES	T	AG SFSLSVRD	FDQNQGE
Syp-N	WFH PNI TGVEAENLLL TRG		VDG SFLARPS KS	N	PG DFTLSVRR	N G
ZAP-N	FFY GSI SRAEAEHHLK LAG	M	ADG LFLLRQC LR	S	LG GYVLSLVH	D V
ZAP-C	WYH SSL TREEAERKLY SGA	Q	TDG KFLLRPR KE		QG TYALS LIY	GK
	βA	αA	βB		βC	

Src	NVKHYKI RKL DS	G	GFYI TSR TQF N	SLQQLVAYYSKH	ADGL	CHRLT TVC
Lck	VVKHYKI RNL DN	G	GFYI SPR ITF P	GLHELVRHYTNA	SDGL	CTRLS RPC
Syp-N	AVTHIKI QNT GD		YYDL YGG EKF A	TLAELVQYYMEH	HGQL	VIELK YPL
ZAP-N	RFHHFPI ERQ LN	G	TYAI AGG KAH C	GPAELCEFYSRD	PDGL	PCNLR KPC
ZAP-C	TVYHYLI SQD KA	G	KYCI PEG TKF D	TLWQLVVEYLKLK	ADGL	IYCLK EAC
	βD	$\beta D'$	βE	βF	αB	βG

Fig. 2

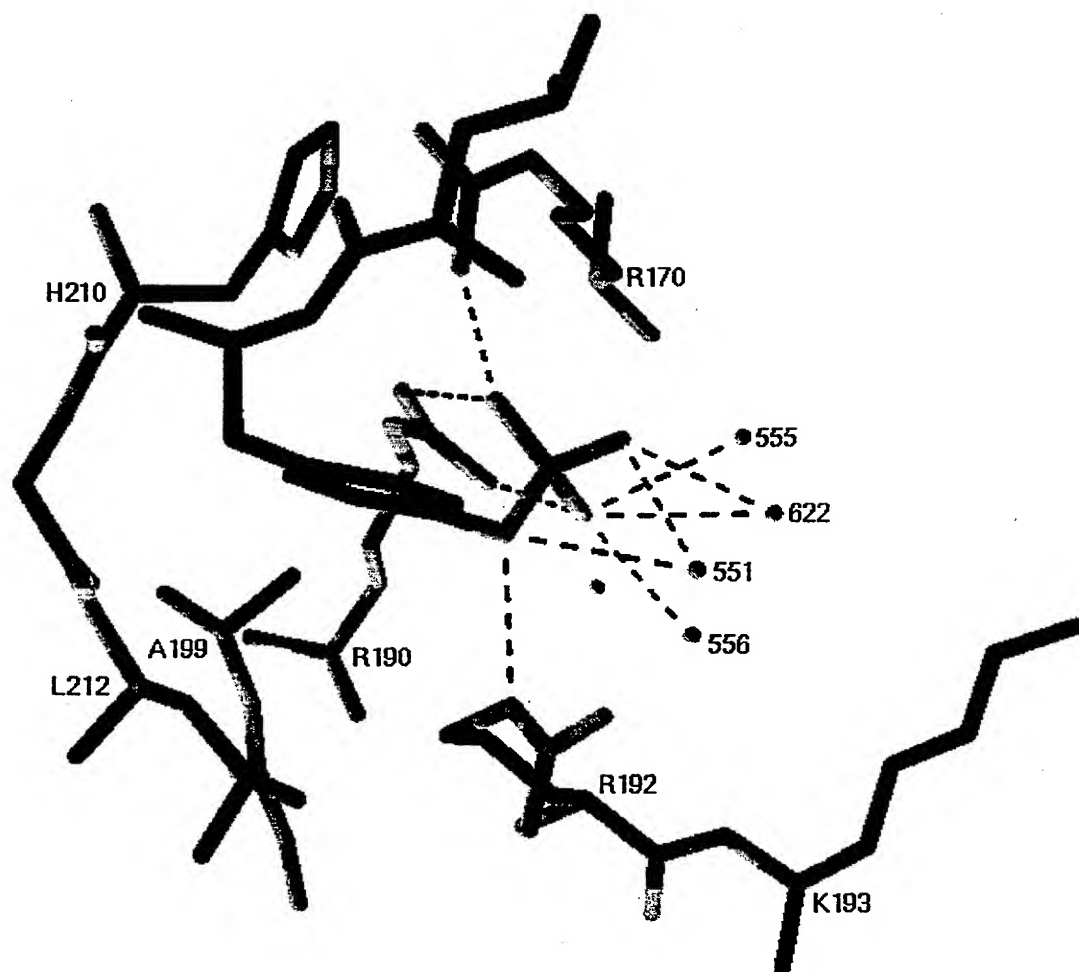


Fig 3A

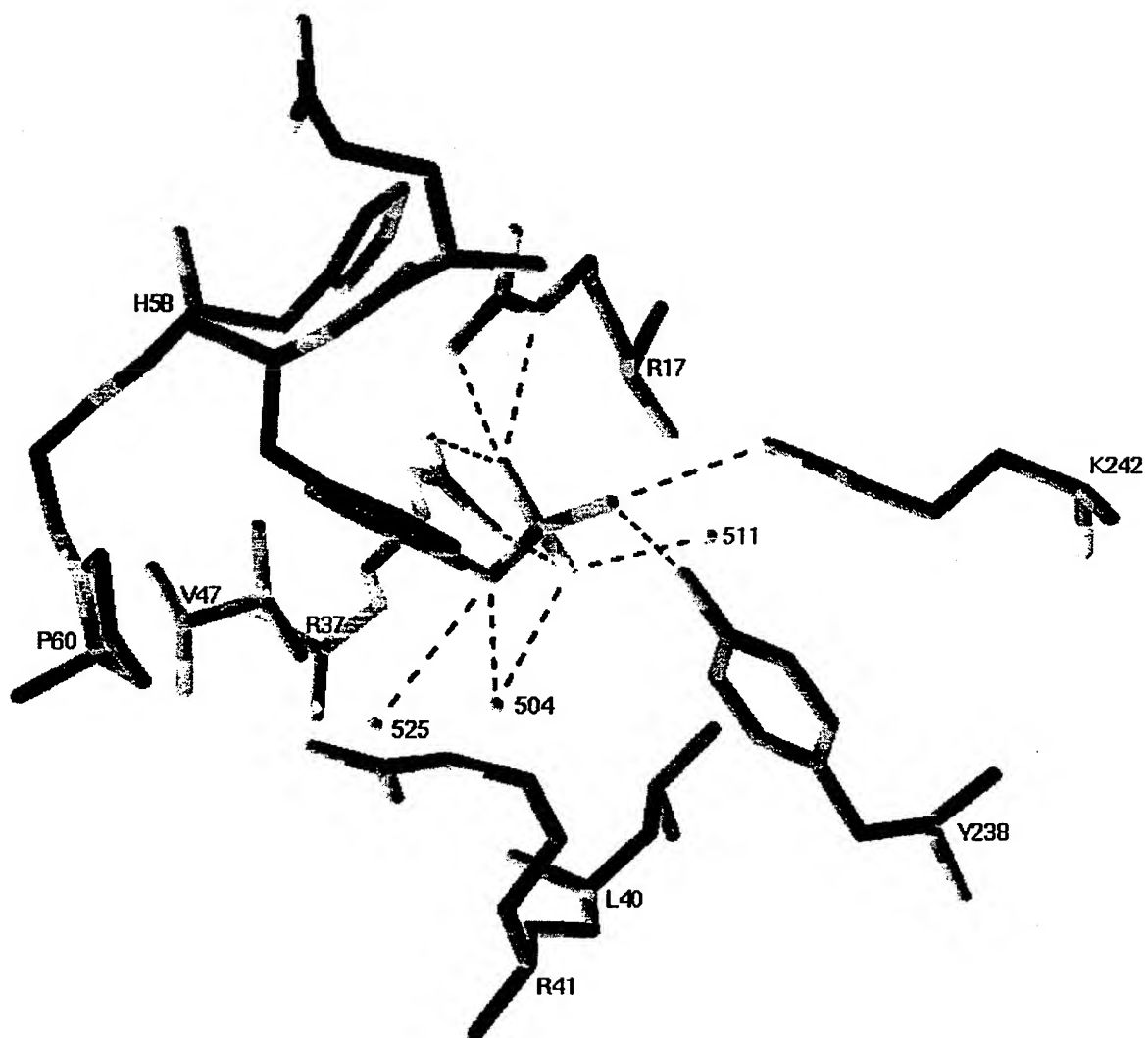


Fig 3B

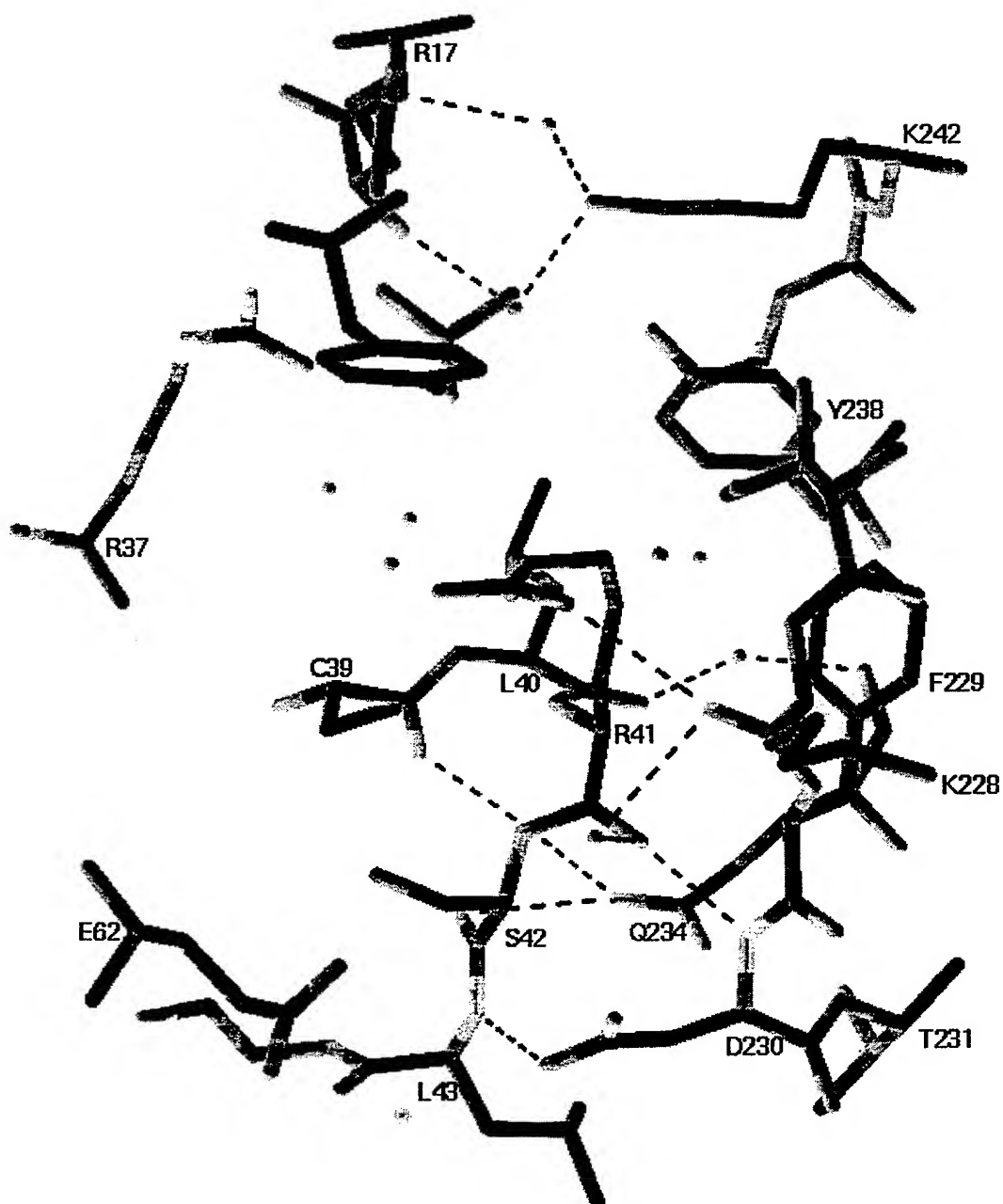


Fig 3C

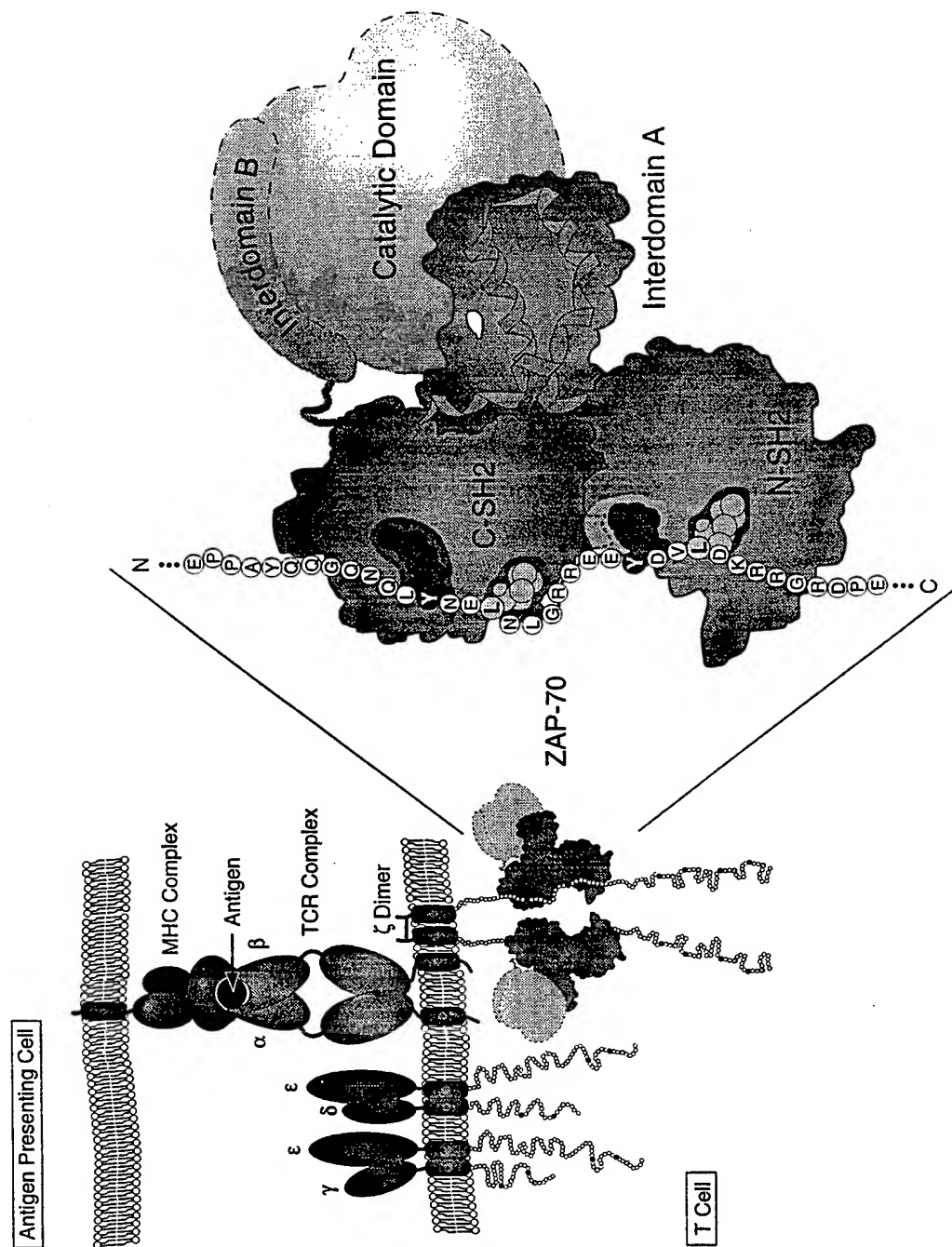


FIG. 4

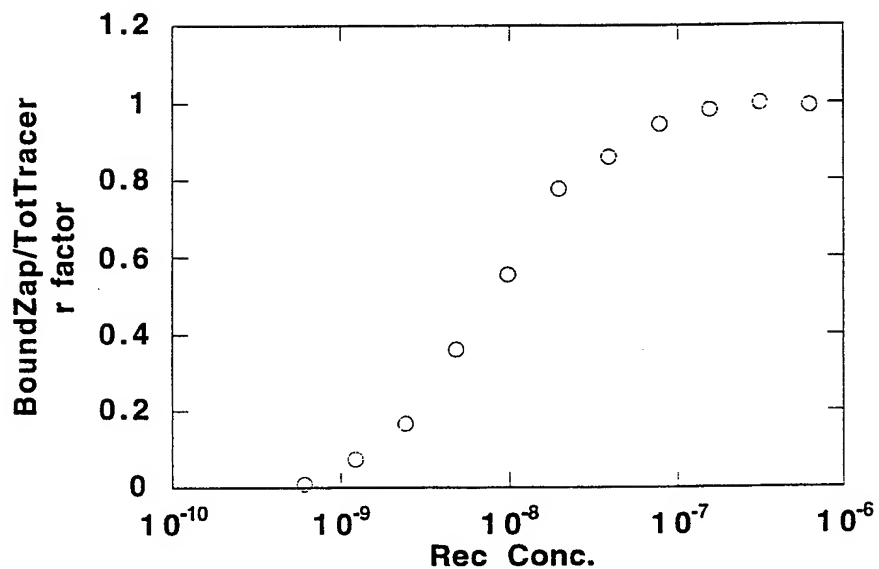
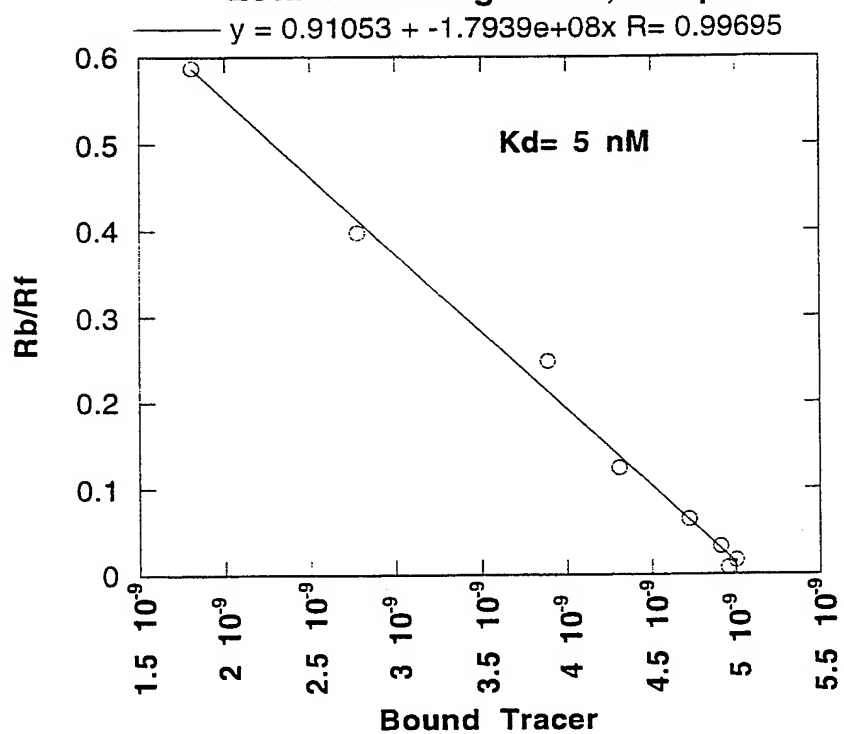
Zeta_1 Binding to N,C-Zap**Zeta-1 Binding To N,C-Zap**

Fig. 5

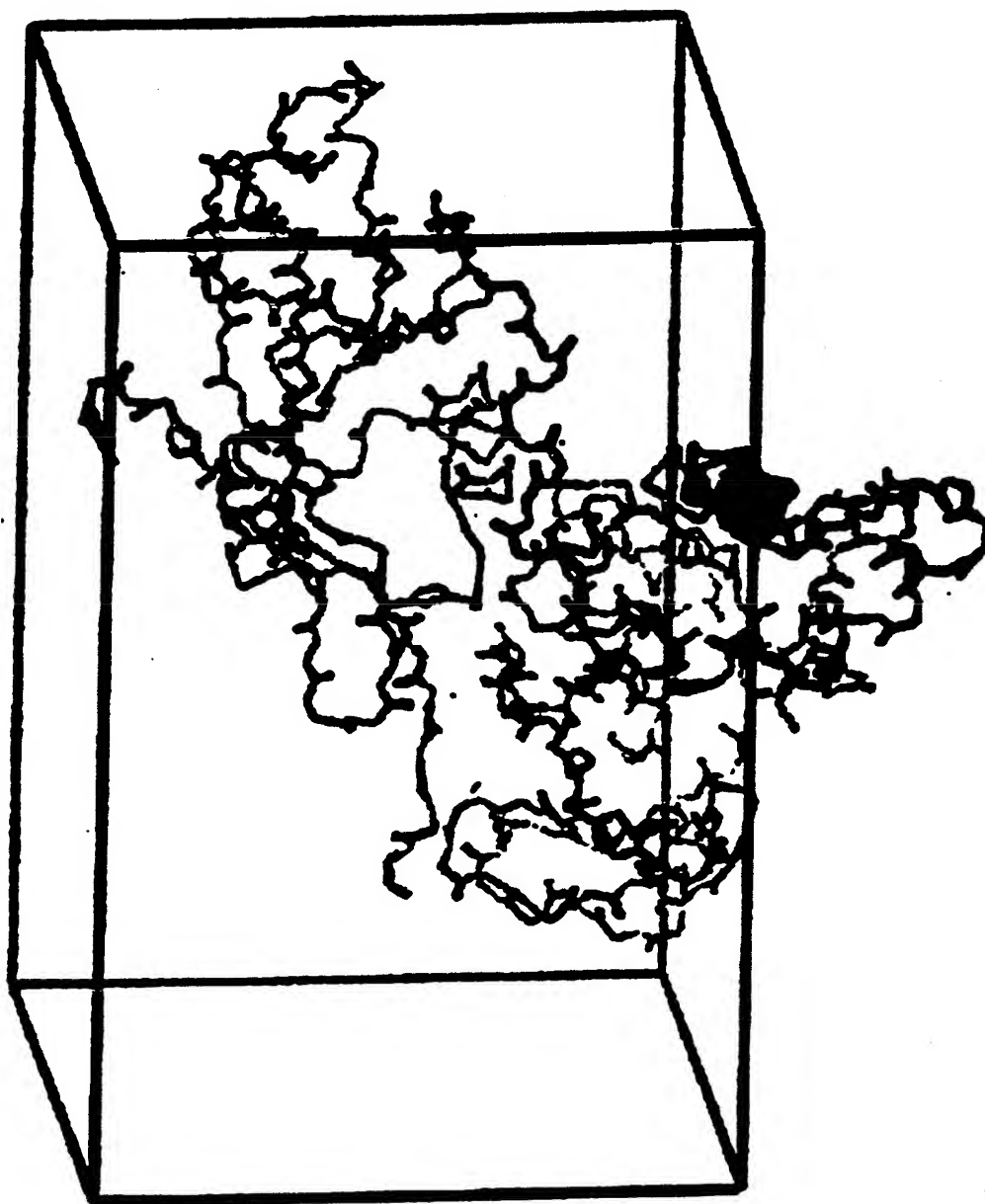


Fig 6

9/12

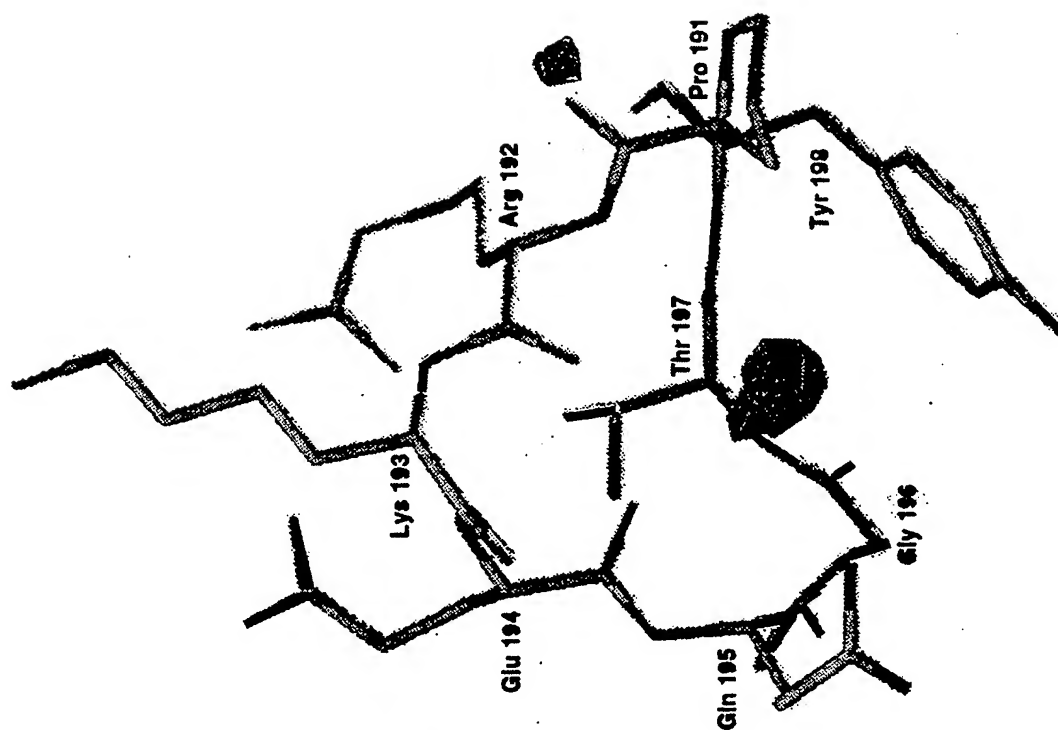


Fig 7B

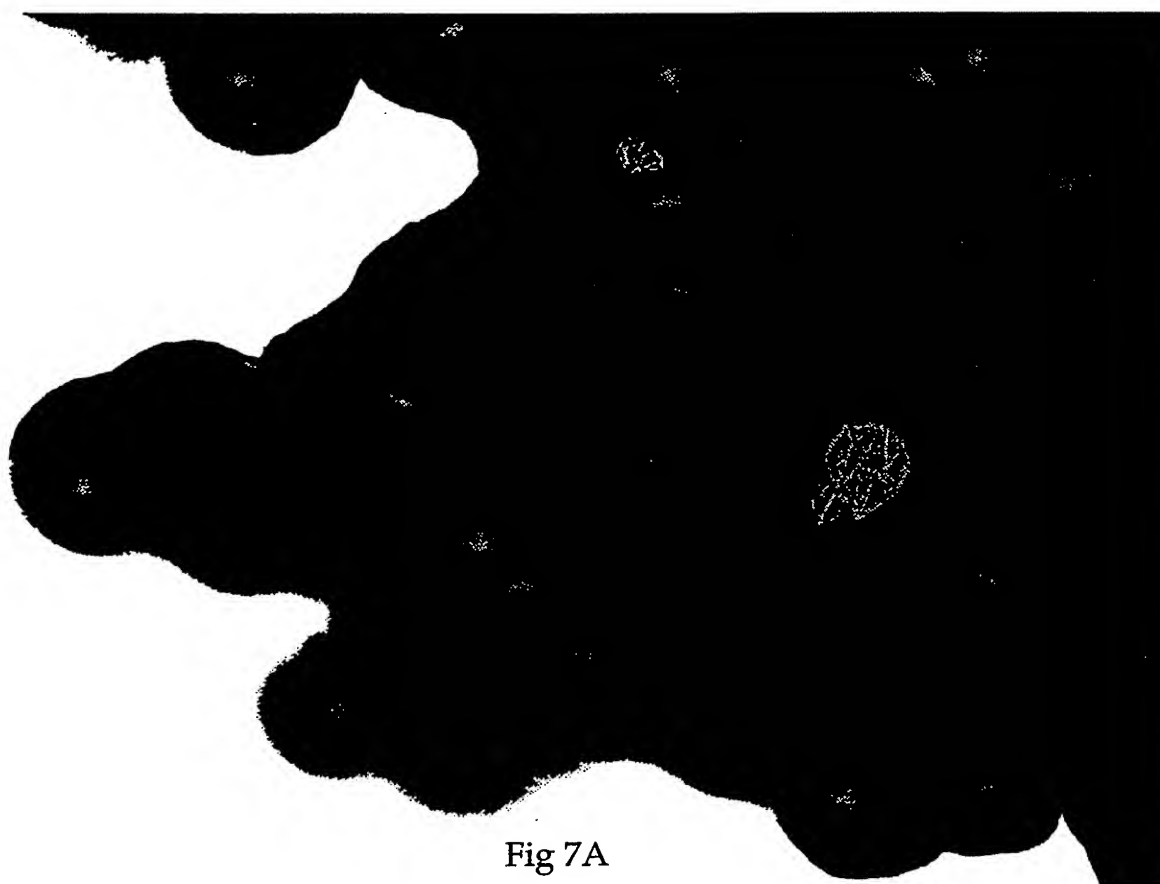


Fig 7A

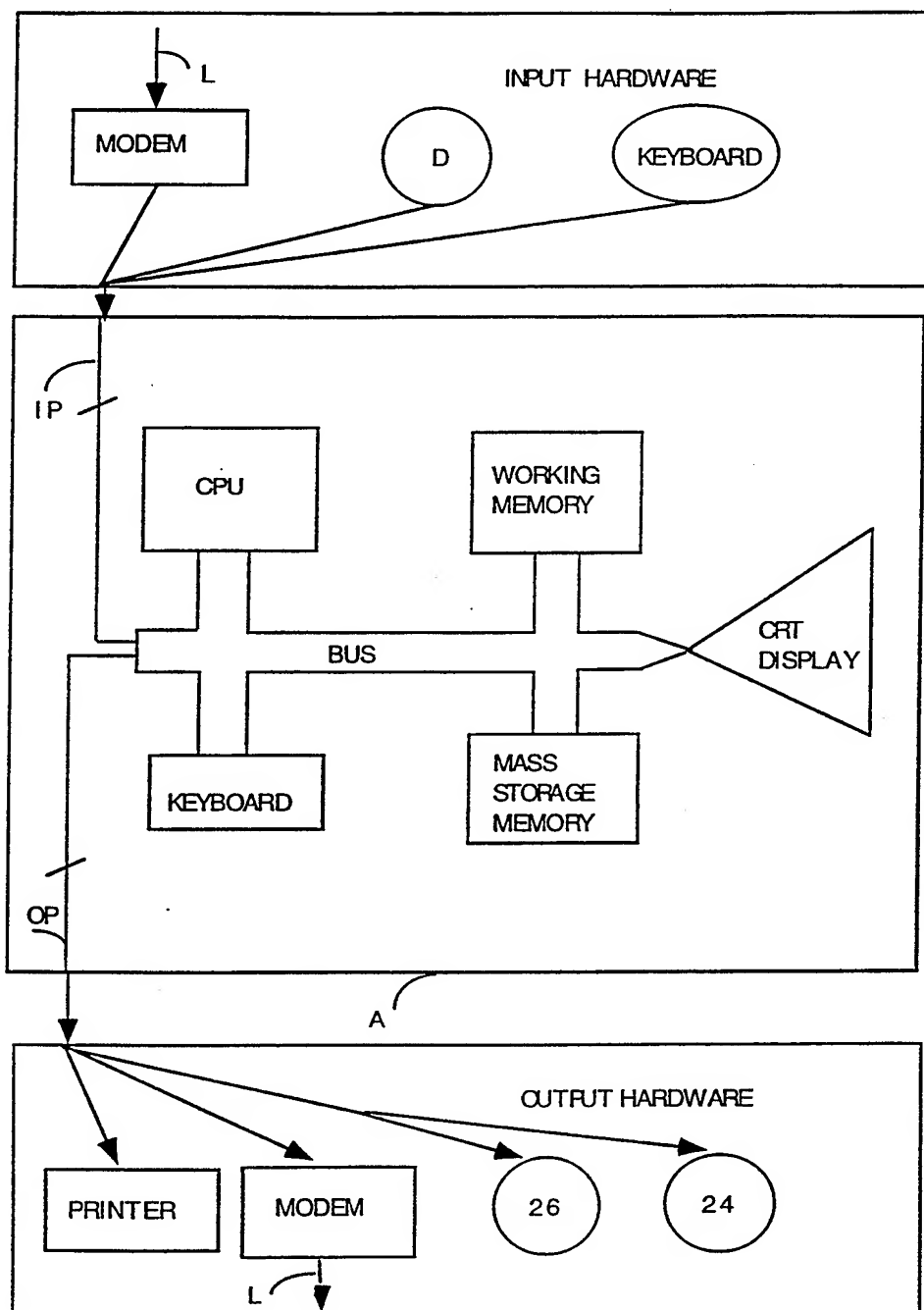


FIG. 8

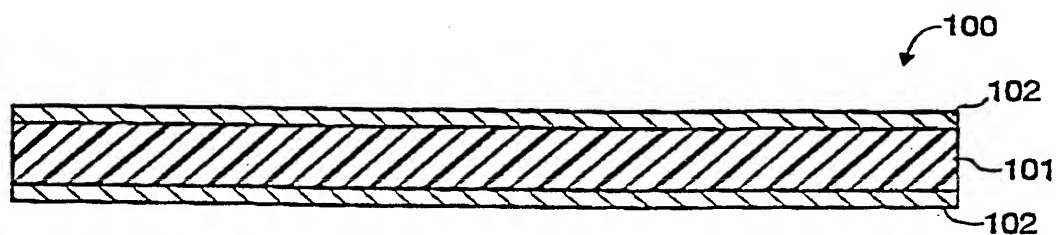


FIG. 9A

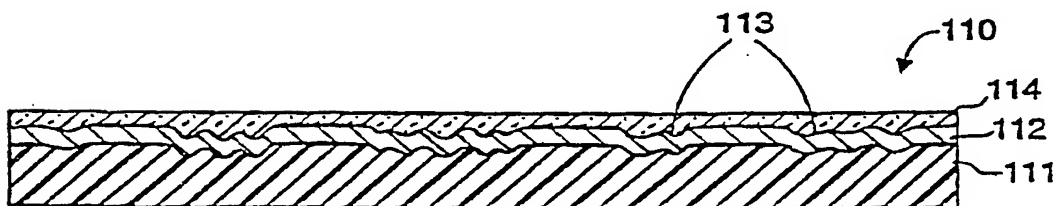


FIG. 9B

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 96/13918

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 C12N9/12 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 C12N G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SCIENCE, vol. 268, 14 April 1995, LANCASTER, PA US, pages 291-293, XP002023956 S MAIGNAN ET AL.: "Crystal structure of the mammalian Grb2 adaptor" see the whole document ---	1-14, 19-27
A	CELL, vol. 72, 12 March 1993, NA US, pages 779-790, XP002023957 G WAKSMAN ET AL.: "Binding of a high-affinity phosphotyrosyl peptide to the Src SH2 domain; crystal structures of the complexed and peptide-free forms" see the whole document --- -/--	1-14, 19-27

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

28 January 1997

Date of mailing of the international search report

05.02.97

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PCT/US 96/13918

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NATURE, vol. 358, 20 August 1992, LONDON GB, pages 646-653, XP002023958 G WAKSMAN ET AL.: "Crystal structure of the phosphotyrosine recognition domain SH2 of v-src complexed with tyrosine-phosphorylated peptides" see the whole document ---</p>	1-14, 19-27
A	<p>JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 269, no. 52, 20 December 1994, MD US, pages a33035-33041, XP002023959 A VON BONIN ET AL.: "The beta-D sheet of the Lck-derived SH2 domain determine specificity of the interaction with tyrosine-phosphorylated ligands in Ramos B cells" see the whole document ---</p>	1-14, 19-27
P,X	<p>FASEB JOURNAL FOR EXPERIMENTAL BIOLOGY, vol. 10, no. 3, 8 March 1996, BETHESDA, MD US, page a164 XP002023960 E DHARM ET AL.: "Large-scale purification and characterization of the 29,000 dalton dual-SH2 domains of the protein tyrosine kinase Syk expressed in E. coli " see the whole document ---</p>	1-14, 19-27
P,X	<p>NATURE, vol. 377, 7 September 1995, LONDON GB, pages 32-38, XP002023961 M H HATADA ET AL.: "Molecular basis for interaction of the protein tyrosine kinase ZAP-70 with the T-cell receptor" see the whole document -----</p>	1-14, 19-27

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 13,14,19,20
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although these claims are directed to a representation of information on a carrier, the search has been carried out as far as possible and based on the molecular structure represented by this information (Art. 17, Rule 39.1 PCT)
2. ☒ Claims Nos.: 15-18
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
There appear to be no claims 15-18 in the application.
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.